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PARAMETERS LISTING SYSTEM (PALIS)

February 1991

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Parameters listing system
(PALIS) Drinking Water
Section, Water Resources
Branch, Ontario Ministry of the
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PARAMETERS LISTING SYSTEM
(PALIS)

Report prepared by:

Drinking Water Section
Water Resources Branch
Ontario Ministry of the Environment

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HANDBOOK FOR THE PARAMETERS LISTING SYSTEM (PALIS)

INTRODUCTION

The parameters listing system (PALIS) consists of a Handbook and a listing of parameters, along with their corresponding guidelines, which can be applied to drinking water (PALIS SYSTEM PARAMETER REPORT). Guidelines from a number of different organizations and/or agencies have been provided, where they are available.

The handbook has been compiled to:-

- a) explain the formatting and nomenclature used in the listings
- b) provide guidance in the use of the system and define some precautions which are necessary.

The guidelines (or objectives or standards) from additional agencies may be added in the future as appropriate, and it is the intention to update this listing as expeditiously as possible when new information is available.

Users may wish to employ this document in conjunction with the Parameter Reference File of the Drinking Water Surveillance Program. The Parameter Reference File is a catalogue of properties, uses and treatment alternatives for chemicals associated with drinking water.

In addition, Appendix 1 provides background information on the procedures used in setting limits for substances in drinking water; this information is useful in understanding levels of risk and also explains why limits for a given substance may differ from agency to agency. Appendix 2 provides some specific information on the mechanism for the development of Ontario Drinking Water Objectives.

THE PARAMETERS LISTING SYSTEM

The Parameters Listing System (PALIS) is a catalogue of known guidelines applicable to drinking water. Each chemical is listed with the regulating agency, type of water, guideline values, type and status and reference material from which the guidelines were extracted. Guidelines may be health related or pertain to the aesthetic quality of drinking water.

A guideline value represents the level (a concentration or a number) of a constituent that ensures an aesthetically pleasing water and does not result in any significant risk to the health of the consumer over a lifetime. The guideline values describe a quality of water that is acceptable for lifelong consumption; therefore short term deviations above the guideline values do not necessarily mean that the water is unsuitable for consumption. The amount and duration that any guideline value can be exceeded without affecting public health depends on the specific substance involved.

GENERAL INFORMATION

The user of the system should be familiar with the information provided in the "Guide to the Use of PALIS", to ensure that the guidelines are used with an understanding of their correct application.

When an Ontario Drinking Water Objective (ODWO) is exceeded, the steps outlined in the "Ontario Drinking Water Objectives" (ISBN 0-7743-8985-0) published in 1984 will be taken.

When another agency's guideline value is exceeded, this should be a signal (i) to investigate the cause, with a possible view to taking remedial action; (ii) to consult the surveillance and public health agencies for advice on suitable action. Recommendations would be made taking into account the intake of the substance from sources other than drinking water (for chemical constituents), the likelihood of adverse effects and the practicability of remedial measures.

When using the PALIS information system it is important that reference be made to the information provided so that the limitations of each limit are recognized and applied in the correct circumstances with the right qualifications.

In the absence of Ontario Drinking Water Objectives and/or Canadian Drinking Water Objectives the most appropriate limits for use would be those developed specifically for drinking water from the United States Environmental Protection Agency (EPA) and the World Health Organization (WHO).

In the case of an emergency spill situation when the duration of the exposure is expected to be short term it is probable that the EPA health advisories are most appropriate; this is what they are designed for.

The term "ambient" tends to have a slightly different meaning dependant upon the agency. If "ambient" limits are to be used, reference should be made to the actual definition of the limits and their application given under the "LIMIT" section beginning on page ix.

Where it is possible to do so, the risk levels associated with the limits should be stated, and these may vary from agency to agency.

Some of the limits listed are legally enforceable by the controlling agency; where information on enforceability was available, it is provided under the "LIMITS" section.

The limits established by the agencies have been derived from the best information currently available; however, the development of objectives is an on-going process. Scientific knowledge of the complex interrelationships that determine water quality continue to increase as does the understanding of the physiological effects of the substances present in water. Also, man continues to introduce new chemical substances into the environment which may contaminate water supplies. It will therefore be necessary to continually revise the established limits as new and more significant data becomes available.

GUIDE TO THE USE OF PALIS

The following headings are used in the system:

CHEMICAL

Because of the manner by which computers sort, chemicals prefixed with a number eg. 2,4,5-T are sorted by number first and then alphabetically. This will apply to those chemicals identified in normal usage by this nomenclature. To facilitate location of chemicals existing as isomers, chemical isomers will be listed by the name of the chemical followed by the numbers denoting the isomer eg. dinitrotoluene(2,4). The Chemical Abstracts Service Registry Numbers (CAS#) are listed with every chemical where available. These are unique numerical identifiers assigned to each chemical substance as it is registered. It has no chemical significance but is simply a machine-checkable number. The CAS# is a concise and unique means of substance identification which is independent of the many systems of chemical nomenclature.

The chemicals are normally cited by the name under which they were listed in the original reference document. If a chemical name can not be found in the parameter report it may be listed under an "alias". At the end of the parameter report is an alias report that lists the "fullname" of the chemical on the parameter list along with aliases (other names) by which the chemical may be known.

AGENCY

1. MOE

The Ontario Ministry of the Environment.

Ontario Drinking Water Objectives (ODWO) are published by the Ministry of the Environment (MOE) and generally are based on the Canadian Drinking Water Guidelines. Interim guidelines may also be proposed from time to time (see also Appendix 2).

2. FLORIDA ST.

The State of Florida, USA.

This state issued the "State of Florida Drinking Water Regulations, Public Drinking Water Systems, DER 1984".

3. CALIFORNIA ST. DHS

The State of California, USA, Department of Health Services.

This state agency published recommended Action Levels for substances in drinking water.

4. WHO

The World Health Organization.

The organization published "Guidelines for Drinking Water Quality, Geneva 1984". The WHO suggests guideline values and tentative guideline values.

5. H&W
Health and Welfare, Canada.

Guidelines for Canadian Drinking Water Quality are prepared by the Federal-Provincial Sub-Committee on Drinking Water of the Federal-Provincial Advisory Committee on Environmental and Occupational Health and published by authority of the Minister of National Health and Welfare.

Local conditions may necessitate modification of some of the recommended values by provincial agencies.

6. EEC
The European Economic Community.

The EEC published its "Drinking Water Directive" in 1980.

7. EPA
United States Environmental Protection Agency.

EPA provides drinking water regulations, proposed limits and health advisories applicable to drinking water and ambient water quality criteria.

8. NAS
The United States National Academy of Sciences.

This is a scientific advisory body that provides EPA with regular scientific guidance on contaminants in drinking water.

9. USSR
The Union of Soviet Socialist Republic.

Maximum Permissible Concentrations (MPC) for chemical substances existing in natural water or used as additives in the process of water treatment have been developed. These concentrations should not exceed the toxicological and organoleptic requirements of the USSR State Standard.

10. MOL
The Ontario Ministry of Labour.

This Ministry may supply guidelines to MOE when circumstances necessitate that an "approved" guideline be established for those compounds for which no Ontario Drinking Water Objective yet exists. Advice may be sought from the MOL on the appropriate guideline to use for a specific case in Ontario.

11. NEW YORK
The State of New York, USA.

This state has published drinking water standards, ambient water quality standards and ground water standards. These are intended to provide numerical limits for substances in waters used as a potable water supply.

12. NEW JERSEY

The State of New Jersey, USA.

This state's Department of Environmental Protection has a comprehensive classification system which is used as an effective tool for optimizing ground water protection efforts, guidelines for levels of certain contaminants appropriate to the various ground water classifications are part of the process. Maps that are prepared on the basis of the classification system can be used to guide activities such as the development of standards for water supply, land use management, source controls and remedial action.

13. NIOSH

The United States National Institute for Occupational Safety and Health.

This organization has published guidelines for several organic chemicals in Drinking Water and Health volume 4, 1982.

14. HAWAII

The State of Hawaii, USA.

The Hawaii State Office of Environmental Quality Control has published Action Levels for several pesticides; these appeared in the American Water Works Association Journal (JAWWA.79 August 1987).

15. NACA

The United States National Agricultural Chemicals Association.

This organization has released a document which suggests a method regulatory officials can use to evaluate groundwater contamination.

16. AWWA

The American Water Works Association.

This association has published emergency limits for some chemical pollutants in OPFLOW, volume 9, number 3, March 1983.

CATEGORY

The following category designations for water are used for this listing system:

DW

Drinking water limits are for application to drinking waters, for most agencies they apply to drinking water at the consumers tap.

AMBIENT

Ambient water limits are applied to surface waters which may be used as a source of drinking water. The definition of "ambient" varies from agency to agency and reference should

be made to the "LIMIT" section where the definition of each ambient limit is provided.

GW

Ground water is water that is held in the soil and ultimately will be used as a potable water supply, agricultural water or for the replenishment of surface waters. The states of New Jersey and New York have set limits which apply to such waters.

LIMIT

The following more fully explains the types of limits as well as some of the background information which relates to their applicability to drinking waters. It is important to recognize, given the differing methods used by agencies, and their varying legislative approaches, that each limit is usually associated with a particular level of risk or has been developed employing different uncertainty factors. For example, EPA's ambient water quality guidelines for carcinogens are given for a risk level of 1×10^{-6} , whereas WHO's drinking water guideline values for these substances are associated with a risk of 1×10^{-5} . Where it is possible to do so, the actual risk level associated with the limits is given in the PALIS listing. In many instances, these data are not readily available. As previously stated all drinking water limits are set to protect the consumer from significant health risk upon consumption of drinking water over a lifetime.

1. AL

"Action Limit" for drinking water supplies in the State of California; when such limits are exceeded the need for some action (which might include resampling, investigation of source and remediation) is indicated.

2. AO

"Aesthetic Objectives" set by Health and Welfare, Canada apply to certain substances or characteristics of drinking water which can affect its acceptance by consumers or interfere with good water supply practices.

3. ASL

"Action Step Levels" have been established by the New York State Department of Health to provide guidance in responding to organic chemical concerns at public water systems.

- a/ ASL1 if met or is exceeded prompts the use of that water source to be discontinued and initiates other appropriate action steps. A response to identify and verify the problem, develop a course of action and describe how a resolution to the problem will be tracked must be initiated (as per PWS 159).
- b/ ASL2 if met or exceeded prompts notification of the Bureau of Public Water Supply Protection and initiation of a response as per ASL1.

4. AWQC

The "Ambient Water Quality Criteria" are set by EPA in the USA and are designed to ensure that surface waters used as a source of drinking water and from which fish are eaten contain no level of chemical that can be construed as hazardous to human health. Chemicals may bio-accumulate or become concentrated in fish flesh and because this must be accounted for, the maximum allowable limits for chemicals in ambient waters may actually be lower than drinking water guidelines. AWQC reported by EPA, assumes a daily consumption by a 70 kg person from the same body of water to be 2 litres of water and 6.5 gm fish, over a lifetime. The criteria for known carcinogens are based on a risk level of 1×10^{-6} and are noted as such with a "***".

5. AWQS

"Ambient Water Quality Standards" set by the State of New York are the basis of effluent limitations for use in state "Pollutant Discharge Elimination System" permits. Waters used as a source of drinking water, if subjected to approved disinfection treatment, with additional treatment if necessary to remove naturally present impurities, will meet NYS drinking water standards. The AWQS limits are classified as human health related, aesthetic or chemical correlation. Chemical correlations are used for substances for which there are not sufficient data or studies carried out and are based on the relationship of that substance to structurally similar chemicals which have sufficient human health effects, animal toxicological data and aesthetic thresholds on which to base standards.

6. DWEL

A "Drinking Water Equivalent Level" set by EPA is defined as the medium-specific exposure which is interpreted to be protective for health effects not involving carcinogenicity over a lifetime of exposure. They are interpreted as lifetime Health Advisories when carcinogenicity is not suspected.

7. ELLTC

"Emergency Limits for Long-term Consumption" have been developed by health experts convened by the AWWA to assist water purveyors specifically for emergency situations where the impact on drinking water supplies is expected to be long-term (over a period of days, months, years).

8. ELSTC

"Emergency Limits for Short-term Consumption" have been developed by health experts convened by AWWA to assist water purveyors specifically for short-term emergencies ranging up to 3 days. Such limits could be used in situations such as a discrete spill of a chemical into a river which is only expected to impact drinking water supplies for a short time period.

9. GL

A "Guideline Level" is a concentration in drinking water of a given substance which should not ideally be exceeded. Guideline levels are intended for use by members of the European Economic Community as a basis for the development of their own standards.

10. GV

"Guideline Values" for drinking water quality are intended for use by countries as a basis for the development of standards, which, if properly implemented, will ensure the safety of drinking water supplies. The compilation of these guidelines covered a period of three years and involved the active participation of nearly 30 WHO Member states, scores of scientists and meetings of ten task groups.

For a number of organic substances that are carcinogens or suspected carcinogens guideline values have been recommended based on a linear, multi-stage extrapolation model which assumes that there is a finite risk from any exposure, however small, and that the risk is proportional to the dose. The guideline values are based upon the selection of an acceptable risk of less than 1 additional case of cancer per 100,000 (1×10^{-5}) population assuming a daily consumption of 2 litres of drinking water by a 70 kg man. The "acceptable" risk of 1 in 100,000 per lifetime was arbitrarily selected by WHO. The uncertainties involved in this approach are significant and are at least about two orders of magnitude ie. the true values could be between one tenth and ten times the calculated values (see also Appendix 1).

11. GW

A simplistic aquifer classification system based on total dissolved solids has been put into place as one of the factors that is considered in the setting of effluent limitations. It is used on a site-specific basis as one of the factors that determine permit limits.

a/ GW1

Class GW1 applies only to the Central Pine Barrens ground water. The limit ensures water that shall be suitable for potable water supply, agricultural water, and continual replenishment of surface waters to maintain the existing quantity and quality.

b/ GW2

Class GW2 applies to ground water having a natural total dissolved solid concentration of 500 mg/l or less. It shall be suitable for potable, industrial or agricultural water supply after conventional treatment for hardness, pH, iron, manganese and chlorination.

c/ GW3

Class GW3 is for ground water having a natural total dissolved solid concentration between 500 and 10000 mg/l. It shall be suitable for conversion to fresh potable water or other reasonable beneficial uses.

12.GWQS

"Ground Water Quality Standards" for the state of New York are for waters used as a source of potable water. These ground waters are found in the saturated zone of unconsolidated deposits and consolidated rock or bed-rock.

13.HA

"Health Advisories" set by EPA are intended to provide useful information in the setting of control priorities in cases where contamination occurs and may be provided on a case-by-case basis in emergency situations such as spills and accidents. They are not legally enforceable standards and are not issued as an official regulation.

a/ HA 1C

One day health advisory for a 10 kg child assuming he consumes 1 litre of water per day.

b/ HA 10C

Ten day health advisory for a 10 kg child assuming he consumes 1 litre of water a day.

c/ HALT C

Longer term health advisory (approximately 7 years, or 10% of an individuals lifetime) for a 10 kg child assuming the child consumes 1 litre of water per day.

d/ HALT A

Longer term health advisory (approximately 7 years, or 10% of an individuals lifetime) for a 70 kg adult assuming the adult consumes 2 litres of water per day.

e/ HA LIFE

Lifetime health advisory for a 70 kg adult assuming all exposure to the substance is from drinking water. In the March 31, 1987 EPA report on Health Advisories HA Life is quoted as a DWEL (Drinking Water Equivalent Level).

f/ HA LIFE A

Lifetime health advisory for a 70 kg adult assuming that 20% of the exposure to the substance is from drinking water and adjusting for additional uncertainty if the substance is a

potential carcinogen.

14.HGL

"Health Guidance Levels" for pesticides are suggested by the US National Agricultural Chemical Association to evaluate ground water contamination. The lifetime chronic exposure level can be derived by multiplying by ten the acceptable daily intake.

15.IDWG

The "Interim Drinking Water Guideline" limit is provided by Health and Welfare Canada from their toxicological data to meet specific needs of the Province of Ontario when no applicable guidelines are available.

16.IMAC

The "Interim Maximum Acceptable Concentration" is used by Ontario and Health and Welfare, Canada to describe limits for substances of current concern with no known chronic effects in mammals and for which there are no established MAC's. Although toxicological, epidemiological and health data are available for such substances the data are subject to public and scientific debate before agreement on an MAC. The IMAC will generally be a conservative value subject to change as more precise information becomes available.

17.LTAL

The "Long-term Action Level" developed by the State of Hawaii is based on a lifetime risk of cancer as 1 chance in 100,000. A plan will be implemented to reduce the level if it persists for more than several months.

18.LTG

The "Long-term Goal" developed by the State of Hawaii is based on a lifetime risk of cancer as 1 chance in 1,000,000. A plan will be developed to reduce the level if it persists for prolonged periods.

19.MAC

The "Maximum Acceptable Concentration" is used in Ontario and by Health and Welfare, Canada for limits applied to substances above which there are known or suspected adverse health effects. MACs from Health and Welfare Canada are not enforceable unless promulgated as such by the appropriate Provincial or Federal agency. MACs from Ontario can be made legally enforceable under the provisions of the Ontario Water Resources Act.

20.MADC

The European Economic Community provides "Maximum Admissible Concentrations"; these are concentrations below which

substances in drinking water cannot, in the course of continuous ingestion, cause, or directly or indirectly result in any adverse health effects to a statistically representative sampling of the population. MADCs are intended for use by members of the EEC as a basis for the development of their own standards.

21.MCL

The EPA defines its "Maximum Contaminant Level" as a lifetime limit at the lowest practicable level of a substance representing a potential hazard to humans in order to minimize the amount of a toxicant contributed by water, particularly when other sources such as milk, food or air are known to represent the major exposure to man. These are legally enforceable and take into account occurrence, relative source contribution factors, treatment technology, monitoring capability and costs in addition to health effects.

22.MCLG

EPA provides a recommended "MCL health goal" which will be defined as the level at which no adverse health effects can be expected to occur. The MCLGs are not legally enforceable but represent the ideal level from the public health perspective. The MCLGs do not accept any degree of risk, hence some MCLGs may be zero if the EPA accepts the hypothesis that any exposure to carcinogens is not safe.

23.MDC

The "Maximum Desirable Concentration" is a limit used in Ontario for substances which when present at higher concentrations are either aesthetically objectionable to an appreciable number of the population or may interfere with good water quality control practices.

24.MPC

The USSR State Committee on Standards approved and brought into force "Maximum Permissible Concentrations" to provide for safe drinking water in respect of epidemic, chemical and organoleptic properties.

25.SG

"Special Guidelines" may be provided by the Ontario Ministry of Labour when no other guidelines are available and inadequate toxicological data exist to proceed to full health-based objectives. Special guidelines are specific to individual cases and are provided only after consultation with scientific experts.

26.SMCL

The "Secondary Maximum Contaminant Level" carries the same definition as the MCL but is not legally enforceable.

27. SNAEL

"Suggested No-Adverse Effect Levels" are similar to health advisories. They provide useful information in the setting of control priorities in cases where contamination occurs and may be provided on a case-by-case basis in emergency situations such as spills and accidents.

28. SNARL

The "Suggested No-Adverse Response Level" is the level of a contaminant in drinking water at which adverse health effects would not be anticipated. A margin of safety is factored in so as to protect the most sensitive members of the general population. Developed by NAS, SNARLS are calculated for a 70 kg adult. In the USA, SNARLS may or may not lead ultimately to the issuance of national standards or MCLs. The latter must take into account occurrence, relative source contribution factors, treatment technology, monitoring capability and costs in addition to health effects. SNARLS are offered as advice to regional and state environmental and health officials, local public officials and water treatment facility personnel who are responsible for the protection of public health when dealing with specific contamination situations.

a/ SNARL 1

A "Suggested No-Adverse Response Level 1" is the level of a contaminant in drinking water at which adverse health effects would not be anticipated for 24 hours.

b/ SNARL 7

A "Suggested No-Adverse Response Level 7" is the level of a contaminant in drinking water at which adverse health effects would not be anticipated for seven days.

c/ SNARL CHR

The "Chronic Suggested No-Adverse Response Level" is used for potential carcinogens where exposure is for more than 7 days; concentrations correspond to a one in one million cancer risk (1×10^{-6} risk).

d/ SNARL CHR*

The "Chronic Suggested No-Adverse Response Level-20%" is the same as SNARL-CHR but assumes that 20% of the acceptable daily intake is from water.

29. STAL

The "Short-Term Action Level" if exceeded initiates a complete shut-down or implementation of a plan to reduce levels within 24 hours, in the State of Hawaii.

A "Tentative Guideline Value" is recommended by WHO in some cases, when, although the carcinogenicity data does not justify a full guideline value, the compounds are considered to have important health implications when present in drinking water. The tentative values are, nevertheless, based on the available health-related data, if additional evidence cannot be obtained, the tentative level in the future may be withdrawn. Tentative guideline values are derived using the multi-stage model even though the selected chemicals do not reveal significant carcinogenic properties. Consequently the tentative values display a greater degree of uncertainty than those derived for the guideline values.

LTYPE

The "limit type" signifies the type of limit that is listed.

H

"H"ealth limits apply to certain substances that are known or suspected to have adverse health effects.

A

"A"esthetic limits apply to certain substances or conditions, the presence of which in excess of the limit does not present a risk to human health, but may render the water unpalatable or otherwise unacceptable to the consumer.

C

"C"hemical correlation limits are based on the relationship of that substance to structurally similar chemicals which have sufficient human health effects data, animal toxicological data and aesthetic thresholds on which to base standards. The chemicals must have similar functional groups and potential metabolic and toxicologic pathways.

STATUS

This indicates the actual "status" of the limit.

S

"S"et indicates that the limit is established and applied by the regulatory agency

T

"T"entative indicates that the limit has been developed but is awaiting public and scientific approval

P

"P"roposed indicates that the limit has been developed and is still under scrutiny before being adopted by the proposing agency.

UOM

The "Unit of Measure" is provided for each of the limits. The unit used is that quoted in the original documentation. The units of measure are shown in Table 1 immediately following the PALIS SYSTEM PARAMETER REPORT, footnotes on p.76.

REFCODE

The "reference code" indicates the specific document from which the guideline/limit was quoted. In some instances, the documents were received directly from the agencies concerned; in others, the information was published in a journal or other publication; as full a reference as possible has been given. All original documents from which PALIS was derived are on file with the Drinking Water Section, Water Resources Branch.

The PALIS database contains an abbreviated reference file. The full reference file report is reproduced in Table 2 which immediately follows Table 1 on p.78.

***** PALIS SYSTEM PARAMETER REPORT---10/16/90 *****

CHEMICAL								
CAS#	AGENCY	CATEGORY	LIMIT	LTYPE	STATUS	VALUE	UOM	REFCODE

(4-CHLORO-O-TOLOXY)ACETIC ACID								
94-74-6	EPA	DW	HA LIFE	H	S	18.000	UG/L	27
			HA LIFE A	H	S	3.600	UG/L	27
			HA1 C	H	S	.100	MG/L	27
			HA10 C	H	S	.100	MG/L	27
			HALT A	H	S	.350	MG/L	27
			HALT C	H	S	.100	MG/L	27
			SNAEL	H	S	.440	UG/L	10
	NEW YORK	GW	GWQS	H	S	.440	UG/L	16

1,1,2TRICHLOR1,2,2TRIFLUOROETHAN								
	CALIFORNIA ST. DHS	DW	MCL	H	P	1,200.000	UG/L	31

1-HYDROXYETHYLIDENE-1,1-DIPHOSPH								
2809-21-4	NEW YORK	AMBIENT	AWQS	D	P	50.000	UG/L	16

2,4,5-T								
93-76-5	EPA	DW	HA LIFE	H	S	.105	MG/L	27
			HA LIFE A	H	S	.021	MG/L	27
			HA1 C	H	S	.800	MG/L	27
			HA10 C	H	S	.800	MG/L	27
			HALT A	H	S	1.050	MG/L	27
			HALT C	H	S	.300	MG/L	27
			SNAEL	H	S	.035	MG/L	10
	H&W	DW	MAC	H	S	.280	MG/L	5
	MOE	DW	MAC	H	S	.280	MG/L	1
	NEW YORK	GW	GWQS	H	S	35.000	UG/L	16

2,4,5-TP								
93-72-1	EPA	AMBIENT	AWQC	H	S	10.000	UG/L	9
		DW	HA LIFE	H	S	260.000	UG/L	7
			HA LIFE A	H	S	52.000	UG/L	7
			HA1 C	H	S	200.000	UG/L	7
			HA10 C	H	S	200.000	UG/L	7
			HALT C	H	S	70.000	UG/L	7
			MCL	H	S	.010	MG/L	28
			MCLG	H	P	.052	MG/L	8
			SNAEL	H	S	.260	UG/L	10
	FLORIDA ST.	DW	MCL	H	S	.010	MG/L	2
	MOE	DW	MAC	H	S	.010	MG/L	1
	NEW YORK	AMBIENT	AWQS	H	S	10.000	UG/L	16
		DW	MCL	H	S	.010	MG/L	25

***** PALIS SYSTEM PARAMETER REPORT,---10/16/90 *****

CAS#	CHEMICAL	AGENCY	CATEGORY	LIMIT	LTYPE	STATUS	VALUE	UOM	REFCODE
-----	-----	-----	-----	-----	-----	-----	-----	---	-----
93-72-1	2,4,5-TP	NEW YORK	GW	GWQS	H	S	.260	UG/L	16
94-75-7	2,4-D	AWWA	DW	ELLTC	H	P	.100	MG/L	23
				ELSTC	H	P	2.000	MG/L	23
		EPA	AMBIENT	AWQC	H	S	100.000	UG/L	9
			DW	NA LIFE	H	S	350.000	UG/L	7
				NA LIFE A	H	S	70.000	UG/L	7
				HA1 C	H	S	1,100.000	UG/L	7
				HA10 C	H	S	300.000	UG/L	7
				MCL	H	S	.100	MG/L	28
				MCLG	H	P	.070	MG/L	8
				SNAEL	H	S	4.400	UG/L	10
	FLORIDA ST.	DW		MCL	H	S	.100	MG/L	2
	H&W	DW		MAC	H	S	.100	MG/L	5
	MOE	DW		MAC	H	S	.100	MG/L	1
	NACA	GW		HGL	H	P	1.250	MG/L	22
	NEW YORK	AMBIENT		AWQS	H	S	100.000	UG/L	16
		DW		MCL	H	S	.100	MG/L	25
		GW		GWQS	H	S	4.400	UG/L	16
	WHO	DW		GV	H	S	100.000	UG/L	4
	2,4-DICHLOROPHENOXYBUTYRIC ACID								
	H&W	DW		IDWG	H	S	.018	MG/L	17
96-24-2	3-CHLORO-1,2-PROPANEDIOL	USSR	DW	MPC	A	S	.700	MG/L	12
83-32-9	ACENAPHTHENE	NEW YORK	AMBIENT	AWQS	A	S	20.000	UG/L	16
	ACEPHATE	NACA	GW	HGL	H	P	.250	MG/L	22
75-07-0	ACETALDEHYDE	USSR	DW	MPC	A	S	.200	MG/L	12
67-64-1	ACETONE	MOL	DW	SG	A	P	1.000	MG/L	15
75-86-5	ACETONE CYANOHYDRIN	USSR	DW	MPC	H	S	.001	MG/L	12

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CHEMICAL								
CAS#	AGENCY	CATEGORY	LIMIT	LTYPE	STATUS	VALUE	UOM	REFCODE

ACETOPHENONE								
98-86-2	USSR	DW	MPC	H	S	.100	MG/L	12

ACETOPHOS								
	USSR	DW	MPC	A	S	.030	MG/L	12

ACIFLUORFEN								
5094-66-6	EPA	DW	HA LIFE	H	S	.440	MG/L	27
			HA LIFE A	H	S	9.000	UG/L	27
			HA1 C	H	S	2.000	MG/L	27
			HA10 C	H	S	2.000	MG/L	27
			HALT A	H	S	.440	MG/L	27
			HALT C	H	S	.130	MG/L	27

ACROLEIN								
107-02-8	EPA	AMBIENT	AWQC	H	S	320.000	UG/L	9

ACRYLAMIDE								
79-06-1	EPA	DW	DWEL	H	S	.007	MG/L	7
			HA1 C	H	S	1.500	MG/L	7
			HA10 C	H	S	.300	MG/L	7
			HALT A	H	S	.070	MG/L	7
			HALT C	H	S	.020	MG/L	7
			MCLG	H	P	.000	MG/L	8

ACRYLIC ACID								
79-10-7	USSR	DW	MPC	H	S	.500	MG/L	12

ACRYLONITRILE								
107-13-1	EPA	AMBIENT	AWQC	H	S	.058	UG/L **	9
	USSR	DW	MPC	H	S	2.000	MG/L	12

ADIPIC ACID DINITRILE								
	USSR	DW	MPC	H	S	.100	MG/L	12

ALACHLOR								
15972-60-8	EPA	DW	DWEL	H	S	.350	MG/L	7
			HA1 C	H	S	.100	MG/L	7
			HA10 C	H	S	.100	MG/L	7
			MCL	H	P	.002	MG/L	34
			MCLG	H	P	.000	MG/L	8
			SNAEL	H	S	.035	MG/L	10

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CHEMICAL								
CAS#	AGENCY	CATEGORY	LIMIT	LTYPE	STATUS	VALUE	UOM	REFCODE

ALACHLOR								
15972-60-8	NEW YORK	GW	GWQS	H	S	35.000	UG/L	16

ALDICARB								
116-06-3	CALIFORNIA ST. DHS	DW	AL	H	S	10.000	UG/L	3
	EPA	DW	HA LIFE	H	S	42.000	UG/L	7
			HA LIFE A	H	S	9.000	UG/L	7
			HA1 C	H	S	12.000	UG/L	7
			HA10 C	H	S	12.000	UG/L	7
			HALT A	H	S	42.000	UG/L	7
			HALT C	H	S	12.000	UG/L	7
			SNAEL	H	S	.350	UG/L	10
	H&W	DW	MAC	H	S	.009	MG/L	5
	MOE	DW	MAC	H	S	.009	MG/L	1
	NACA	GW	HGL	H	P	.030	MG/L	22
	NEW YORK	AMBIENT	AWQS	H	S	7.000	UG/L	16
		DW	ASL1	H	S	7.000	UG/L	26
			ASL2	H	S	3.000	UG/L	26
		GW	GWQS	H	S	.350	UG/L	16

ALDICARB SULFOXIDE								
	EPA	DW	MCL	H	P	.010	MG/L	34

ALDICARB SULFOXONE								
	EPA	DW	MCL	H	P	.040	MG/L	34

ALDICARB(+SULFOXIDE AND SULFONE)								
	EPA	DW	MCLG	H	P	.009	MG/L	8

ALDRIN								
309-00-2	AWMA	DW	ELLTC	H	P	.032	MG/L	23
			ELSTC	H	P	.050	MG/L	23
	CALIFORNIA ST. DHS	DW	AL	H	S	.050	UG/L	3
	EPA	AMBIENT	AWQC	H	S	.074	MG/L **	9
	NAS	DW	SNARL CHR	H	S	.107	UG/L **	11
	USSR	DW	MPC	A	S	.002	MG/L	12

ALDRIN AND DIELDRIN								
309-00-2+D	H&W	DW	MAC	H	S	.700	UG/L	5
	MOE	DW	MAC	H	S	.700	UG/L	1
	NEW JERSEY	GW	GW1	A	S	.003	UG/L	21
			GW2	A	S	.003	UG/L	21

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CHEMICAL

CAS#	AGENCY	CATEGORY	LIMIT	LTYPE	STATUS	VALUE	UOM	REFCODE
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ALDRIN AND DIELDRIN								
309-00-2+D	NEW JERSEY	GW	GW3	A	S	.003	UG/L	21
	WHO	DW	GV	H	S	.030	UG/L	4
ALIPHATIC AMINES C10-C16								
	USSR	DW	MPC	A	S	.040	MG/L	12
ALIPHATIC AMINES C16-C20								
	USSR	DW	MPC	A	S	.030	MG/L	12
ALIPHATIC AMINES C7-C9								
	USSR	DW	MPC	A	S	.100	MG/L	12
ALKYL BENZENESULFONATES								
	USSR	DW	MPC	A	S	.500	MG/L	12
ALKYL SULFATES								
	USSR	DW	MPC	A	S	.500	MG/L	12
ALKYL SULFONATES								
	USSR	DW	MPC	A	S	.500	MG/L	12
ALUMINUM								
7429-90-5	EEC	DW	GL	A	S	.050	MG/L	6
			MADC	A	S	.200	MG/L	6
	EPA	DW	SMCL	A	P	.050	MG/L	34
	USSR	DW	MPC	H	S	.500	MG/L	12
	WHO	DW	GV	A	S	.200	MG/L	4
AMETRYN								
834-12-8	EPA	DW	HA LIFE	H	S	.300	MG/L	27
			HA LIFE A	H	S	.060	MG/L	27
			HA1 C	H	S	8.600	MG/L	27
			HA10 C	H	S	8.600	MG/L	27
			HALT A	H	S	3.000	MG/L	27
			HALT C	H	S	.860	MG/L	27
	NACA	GW	MGL	H	P	.125	MG/L	22
AMIBEN								
133-90-4	EPA	DW	SNAEL	H	S	.088	MG/L	10
	NEW YORK	GW	GWQS	H	S	87.500	UG/L	16

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CAS#	AGENCY	CATEGORY	LIMIT	LTYPE	STATUS	VALUE	UOM	REFCODE
CHEMICAL								
	AMINOCRESOL							
	NEW YORK	AMBIENT	AWQS	A	S	1.000	UG/L	16
95-55-6	AMINOPHENOL (ORTHO) USSR	DW	MPC	A	S	.010	MG/L	12
123-30-8	AMINOPHENOL (PARA) USSR	DW	MPC	A	S	.050	MG/L	12
7664-41-7	AMMONIA NEW JERSEY	GW	GW1 GW2 GW3	A A A	S S S	.500 .500 .500	UG/L UG/L UG/L	21 21 21
	NEW YORK	AMBIENT	AWQS	H	S	2,000.000	UG/L	16
	USSR	DW	MPC	A	S	2.000	MG/L	12
	AMMONIUM EEC	DW	GL MADC	A A	S S	.050 .500	MG/L MG/L	6 6
7790-98-9	AMMONIUM PERCHLORATE USSR	DW	MPC	H	S	5.000	MG/L	12
7773-06-0	AMMONIUM SULFAMATE EPA	DW	HA LIFE HA LIFE A HA1 C HA10 C HALT A HALT C	H H H H H H	S S S S S S	7.500 1.500 21.400 21.400 75.000 21.400	MG/L MG/L MG/L MG/L MG/L MG/L	27 27 27 27 27 27
62-53-3	ANILINE USSR	DW	MPC	H	S	.100	MG/L	12
	ANISOL USSR	DW	MPC	H	S	.050	MG/L	12
7440-36-0	ANTIMONY EEC	DW	MADC	H	S	10.000	UG/L	6
	EPA	AMBIENT	AWQC	H	S	146.000	UG/L	9
	USSR	DW	MPC	H	S	.050	MG/L	12

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CHEMICAL

CAS#	AGENCY	CATEGORY	LIMIT	LTYPE	STATUS	VALUE	UOM	REFCODE
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ARSENIC								
7440-38-2	EEC	DW	MADC	H	S	50.000	UG/L	6
	EPA	AMBIENT	AWQC	H	S	2.200	MG/L **	9
		DW	HA LIFE	H	S	50.000	UG/L	7
			HA LIFE A	H	S	50.000	UG/L	7
			HA1 C	H	S	50.000	UG/L	7
			HA10 C	H	S	50.000	UG/L	7
			HALT A	H	S	50.000	UG/L	7
			HALT C	H	S	50.000	UG/L	7
			MCL	H	S	.050	MG/L	28
			MCLG	H	P	.050	MG/L	8
	FLORIDA ST.	DW	MCL	H	S	.050	MG/L	2
	H&W	DW	MAC	H	S	.025	MG/L	5
	MOE	DW	MAC	H	S	.025	MG/L	1
	NEW YORK	AMBIENT	AWQS	H	S	50.000	UG/L	16
		DW	MCL	H	S	.050	MG/L	25
		GW	GWQS	H	S	.025	MG/L	16
	USSR	DW	MPC	H	S	.050	MG/L	12
	WHO	DW	GV	H	S	.050	MG/L	4

ARSENIC AND COMPOUNDS								
7440-38-2+	NEW JERSEY	GW	GW1	A	S	.050	MG/L	21
			GW2	A	S	.050	MG/L	21
			GW3	A	S	.050	MG/L	21

ASBESTOS								
1332-21-4	EPA	AMBIENT	AWQC	H	S	30,000.000	F/L **	9
		DW	MCL	H	P	7,000,000.000	F/L	34
			MCLG	H	P	7,100,000.000	F/L	8

ATRAZINE								
1912-24-9	EPA	DW	HA LIFE	H	S	.123	MG/L	27
			HA LIFE A	H	S	3.000	UG/L	27
			HA1 C	H	S	.100	MG/L	27
			HA10 C	H	S	.100	MG/L	27
			HALT A	H	S	.123	MG/L	27
			HALT C	H	S	.035	MG/L	27
			MCL	H	P	.002	MG/L	34
			SNAEL	H	S	7.500	UG/L	10
	H&W	DW	IMAC	H	S	.060	MG/L	5
	MOE	DW	IMAC	H	S	.060	MG/L	1
	NACA	GW	HGL	H	P	.375	MG/L	22

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CAS#	AGENCY	CATEGORY	LIMIT	LTYPE	STATUS	VALUE	UOM	REFCODE

ATRAZINE								
1912-24-9	NAS	DW	SNARL CHR*	H	S	150.000	UG/L	11
	NEW YORK	DW	ASL1	H	S	25.000	UG/L	26
			ASL2	H	S	5.000	UG/L	26
		GW	GWQS	H	S	7.500	UG/L	16

AZINPHOSMETHYL								
86-50-0	EPA	DW	SNAEL	H	S	4.400	UG/L	10
	H&W	DW	MAC	H	S	.020	MG/L	5
	MOE	DW	MAC	H	S	.020	MG/L	1
	NACA	GW	HGL	H	P	.250	MG/L	22
	NEW YORK	GW	GWQS	H	S	4.400	UG/L	16

BARIUM								
7440-39-3	EEC	DW	GL	A	S	100.000	UG/L	6
	EPA	AMBIENT	AWQC	H	S	1.000	MG/L	9
		DW	HA LIFE	H	S	1,800.000	UG/L	7
			HA LIFE A	H	S	1,500.000	UG/L	7
			HA1 C	H	S	.510	MG/L	7
			HA10 C	H	S	.510	MG/L	7
			HA1T C	H	S	.510	MG/L	7
			MCL	H	S	1.000	MG/L	28
			MCLG	H	P	1.500	MG/L	8
	FLORIDA ST.	DW	MCL	H	S	1.000	MG/L	2
	H&W	DW	MAC	H	S	1.000	MG/L	5
	MOE	DW	MAC	H	S	1.000	MG/L	1
	NEW JERSEY	GW	GW1	A	S	1.000	UG/L	21
			GW2	A	S	1.000	UG/L	21
			GW3	A	S	1.000	UG/L	21
	NEW YORK	AMBIENT	AWQS	H	S	1,000.000	UG/L	16
		DW	MCL	H	S	1.000	MG/L	25
		GW	GWQS	H	S	1.000	MG/L	16
	USSR	DW	MPC	A	S	4.000	MG/L	12

BENDIOCARB								
22781-23-3	H&W	DW	MAC	H	S	.040	MG/L	5
	MOE	DW	MAC	H	S	.040	MG/L	1

BENEFIN								
	EPA	DW	SNAEL	H	S	35.000	UG/L	10
	NEW YORK	GW	GWQS	H	S	35.000	UG/L	16

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CHEMICAL

CAS#	AGENCY	CATEGORY	LIMIT	LTYPE	STATUS	VALUE	UOM	REFCODE

BENTAZON								
25057-89-0	EPA	DW	HA LIFE	H	S	87.500	UG/L	27
			HA LIFE A	H	S	17.500	UG/L	27
			HA1 C	H	S	.250	MG/L	27
			HA10 C	H	S	.250	MG/L	27
			HALT A	H	S	.875	MG/L	27
			HALT C	H	S	.250	MG/L	27
	NACA	GW	HGL	H	P	11.750	MG/L	22

BENZENE								
71-43-2	CALIFORNIA ST. DHS	DW	AL	H	S	.700	UG/L	3
	EPA	AMBIENT	AWQC	H	S	.660	UG/L **	9
		DW	HA1 C	H	S	235.000	UG/L	7
			HA10 C	H	S	235.000	UG/L	7
			MCL	H	S	5.000	UG/L	20
			MCLG	H	S	.000	UG/L	8
	FLORIDA ST.	DW	MCL	H	S	1.000	UG/L	2
	H&W	DW	MAC	H	S	.005	MG/L	5
	MOE	DW	MAC	H	S	.005	MG/L	1
	NAS	DW	SNARL 7	H	S	250.000	UG/L	11
	NIOSH	DW	SNARL 7	H	S	.250	MG/L	24
	USSR	DW	MPC	H	S	.500	MG/L	12
	WHO	DW	GV	H	S	10.000	UG/L	4

BENZIDINE								
92-87-5	EPA	AMBIENT	AWQC	H	S	.120	NG/L **	9
	NEW JERSEY	GW	GW1	A	S	.100	UG/L	21
			GW2	A	S	.100	UG/L	21
			GW3	A	S	.100	UG/L	21

BENZINE								
	USSR	DW	MPC	A	S	.100	MG/L	12

BENZO(A)PYRENE								
50-32-8	H&W	DW	MAC	H	S	.010	UG/L	5
	MOE	DW	MAC	H	S	.010	UG/L	1
	NEW YORK	AMBIENT	AWQS	H	P	.200	UG/L	16
	WHO	DW	GV	H	S	.010	UG/L	4

BERYLLIUM								
7440-41-7	AWWA	DW	ELLTC	H	P	.000	MG/L	23
			ELSTC	H	P	.100	MG/L	23

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CHEMICAL								
CAS#	AGENCY	CATEGORY	LIMIT	LTYPE	STATUS	VALUE	UOM	REFCODE

BERYLLIUM								
7440-41-7	EPA	AMBIENT	AWQC	H	S	6.800	MG/L **	9
	USSR	DW	MPC	H	S	.200	UG/L	12

BHC(ALPHA)								
319-84-6	CALIFORNIA ST. DHS	DW	AL	H	S	.700	UG/L	3
	EPA	AMBIENT	AWQC	H	S	9.200	MG/L **	9

BHC(BETA)								
	CALIFORNIA ST. DHS	DW	AL	H	S	.300	UG/L	3
	EPA	AMBIENT	AWQC	H	S	16.300	MG/L **	9

BHC(TECHNICAL)								
	EPA	AMBIENT	AWQC	H	S	12.300	MG/L **	9

BIS-(2-ETHYLHEXYL)PHTHALATE								
117-81-7	EPA	AMBIENT	AWQC	H	S	15.000	MG/L	9
	NAS	DW	SNARL CHR*	H	S	4,200.000	UG/L	11
	USSR	DW	MPC	A	S	1.000	UG/L	12

BOD(5 DAY)								
	NEW JERSEY	GW	GW1	A	S	3.000	MG/L	21

BORON								
7440-42-8	AWWA	DW	ELLTC	H	P	1.000	MG/L	23
			ELSTC	H	P	25.000	MG/L	23
	EEC	DW	GL	A	S	1,000.000	UG/L	6
	H&W	DW	MAC	H	S	5.000	MG/L	5
	MOE	DW	MAC	H	S	5.000	MG/L	1

BROMACIL								
314-40-9	EPA	DW	HA LIFE	H	S	4.200	MG/L	27
			HA LIFE A	H	S	.080	MG/L	27
			HA1 C	H	S	4.600	MG/L	27
			HA10 C	H	S	4.600	MG/L	27
			HALT A	H	S	8.700	MG/L	27
			HALT C	H	S	2.500	MG/L	27
			SNAEL	H	S	4.400	UG/L	10
	NACA	GW	HGL	H	P	.125	MG/L	22
	NEW YORK	GW	GWQS	H	S	4.400	UG/L	16

BROMOXYNIL								
1689-84-5	H&W	DW	IMAC	H	S	.005	MG/L	5

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CHEMICAL								
CAS#	AGENCY	CATEGORY	LIMIT	LTYPE	STATUS	VALUE	UOM	REFCODE

BROMOXYNIL								
1689-84-5	MOE	DW	IMAC	H	S	.005	MG/L	1
	NACA	GW	HGL	H	P	.025	MG/L	22

BUTACHLOR								
	EPA	DW	SNAEL	H	S	3.500	UG/L	10
	NEW YORK	GW	GWQS	H	S	3.500	UG/L	16

BUTYL ACRYLATE								
141-32-2	USSR	DW	MPC	A	S	.015	MG/L	12

BUTYL BENZENE								
	USSR	DW	MPC	A	S	.100	MG/L	12

BUTYL XANTHATE								
	USSR	DW	MPC	A	S	.001	MG/L	12

BUTYLATE								
2008-41-5	EPA	DW	HA LIFE	H	S	2.450	MG/L	27
			HA LIFE A	H	S	.050	MG/L	27
			HA1 C	H	S	2.400	MG/L	27
			HA10 C	H	S	2.400	MG/L	27

BUTYLENE								
	USSR	DW	MPC	A	S	.200	MG/L	12

CADMIUM								
7440-43-9	EEC	DW	MADC	H	S	5.000	UG/L	6
	EPA	AMBIENT	AWQC	H	S	10.000	UG/L	9
		DW	HA LIFE	H	S	18.000	UG/L	7
			HA LIFE A	H	S	5.000	UG/L	7
			HA1 C	H	S	43.000	UG/L	7
			HA10 C	H	S	43.000	UG/L	7
			HA1 A	H	S	18.000	UG/L	7
			HA1 C	H	S	5.000	UG/L	7
			MCL	H	S	.010	MG/L	28
			MCLG	H	P	.005	MG/L	8
	FLORIDA ST.	DW	MCL	H	S	.010	MG/L	2
	H&W	DW	MAC	H	S	.005	MG/L	5
	MOE	DW	MAC	H	S	.005	MG/L	1
	NEW YORK	AMBIENT	AWQS	H	S	10.000	UG/L	16
		DW	MCL	H	S	.010	MG/L	25

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CHEMICAL								
CAS#	AGENCY	CATEGORY	LIMIT	LTYPE	STATUS	VALUE	UOM	REFCODE

CADMIUM								
7440-43-9	NEW YORK	GW	GWQS	H	S	.010	MG/L	16
	USSR	DW	MPC	H	S	.010	MG/L	12
	WHO	DW	GV	H	S	.005	MG/L	4

CADMIUM AND COMPOUNDS								
7440-43-9+	NEW JERSEY	GW	GW2	A	S	.010	MG/L	21
			GW3	A	S	.010	MG/L	21

CALCIUM								
7440-70-2	EEC	DW	GL	A	S	100.000	MG/L	6

CALCIUM CARBONATE								
471-34-1	WHO	DW	GV	A	S	500.000	MG/L	4

CAPTAN								
133-06-2	CALIFORNIA ST. DHS	DW	AL	H	S	.350	MG/L	3
	EPA	DW	SNAEL	H	S	.018	MG/L	10
	NEW YORK	GW	GWQS	H	S	17.500	UG/L	16

CARBARYL								
63-25-2	EPA	DW	HA LIFE	H	S	3.500	MG/L	27
			HA LIFE A	H	S	.700	MG/L	27
			HA1 C	H	S	1.000	MG/L	27
			HA10 C	H	S	1.000	MG/L	27
			HA1T C	H	S	1.000	MG/L	27
			SNAEL	H	S	.029	MG/L	10
	H&W	DW	MAC	H	S	.090	MG/L	5
	MOE	DW	MAC	H	S	.070	MG/L	1
	NACA	GW	MGL	H	P	1.000	MG/L	22
	NEW YORK	GW	GWQS	H	S	28.700	UG/L	16
	USSR	DW	MPC	A	S	.100	MG/L	12

CARBINE								
	USSR	DW	MPC	A	S	.030	MG/L	12

CARBOFURAN								
1563-66-2	CALIFORNIA ST. DHS	DW	MCL	H	P	18.000	UG/L	31
	EPA	DW	HA LIFE	H	S	180.000	UG/L	7
			HA LIFE A	H	S	36.000	UG/L	7
			HA1 C	H	S	50.000	UG/L	7
			HA10 C	H	S	50.000	UG/L	7

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CHEMICAL

CAS#	AGENCY	CATEGORY	LIMIT	LTYPE	STATUS	VALUE	UOM	REFCODE

CARBOFURAN								
1563-66-2	EPA	DW	HALT A	H	S	180.000	UG/L	7
			HALT C	H	S	50.000	UG/L	7
			MCL	H	P	.040	MG/L	34
			MCLG	H	P	.036	MG/L	8
	H&W	DW	MAC	H	S	.090	MG/L	5
	MOE	DW	MAC	H	S	.090	MG/L	1
	NACA	GW	HGL	H	P	.050	MG/L	22
	NEW YORK	AMBIENT	AWQS	H	S	15.000	UG/L	16
		DW	ASL1	H	S	15.000	UG/L	26
			ASL2	H	S	3.000	UG/L	26

CARBON DISULFIDE								
75-15-0	USSR	DW	MPC	A	S	1.000	MG/L	12

CARBON TETRACHLORIDE								
6-23-5	CALIFORNIA ST. DHS	DW	AL	H	S	5.000	UG/L	3
	EPA	AMBIENT	AWQC	H	S	.400	UG/L **	9
		DW	DWEL	H	S	25.000	UG/L	7
			HA1 C	H	S	4,000.000	UG/L	7
			HA10 C	H	S	160.000	UG/L	7
			HALT A	H	S	250.000	UG/L	7
			HALT C	H	S	71.000	UG/L	7
			MCL	H	S	5.000	UG/L	20
			MCLG	H	S	.000	UG/L	8
	FLORIDA ST.	DW	MCL	H	S	3.000	UG/L	2
	H&W	DW	MAC	H	S	.005	MG/L	5
	MOE	DW	MAC	H	S	.005	MG/L	1
	NAS	DW	SNARL 7	H	S	2,000.000	UG/L	11
			SNARL CHR	H	S	6.670	UG/L **	11
	USSR	DW	MPC	H	S	.300	MG/L	12
	WHO	DW	TGV	H	S	3.000	UG/L	4

CARBOPHENOTHION								
786-19-6	CALIFORNIA ST. DHS	DW	AL	H	S	.007	MG/L	3

CARBOPHOS								
	USSR	DW	MPC	A	S	.050	MG/L	12

CARBOXIN								
5234-68-4	EPA	DW	HA LIFE	H	S	3.500	MG/L	27
			HA LIFE A	H	S	.700	MG/L	27

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CHEMICAL								
CAS#	AGENCY	CATEGORY	LIMIT	LTYPE	STATUS	VALUE	UOM	REFCODE

CARBOXIN								
5234-68-4	EPA	DW	HA1 C	H	S	1.000	MG/L	27
			HA10 C	H	S	1.000	MG/L	27
			HALT A	H	S	3.500	MG/L	27
			HALT C	H	S	1.000	MG/L	27

CELATOX								
	USSR	DW	MPC	A	S	.500	MG/L	12

CESIUM-137								
	H&W	DW	MAC	H	S	50.000	BECQ/L	5
	MOE	DW	MAC	H	S	50.000	BECQ/L	1

CHINOMETHIONATE								
	NACA	GW	HGL	H	P	.300	MG/L	22

CHLORAMBEN								
	EPA	DW	HA LIFE	H	S	.525	MG/L	27
			HA LIFE A	H	S	.105	MG/L	27
			HA1 C	H	S	2.500	MG/L	27
			HA10 C	H	S	2.500	MG/L	27
			HALT A	H	S	.525	MG/L	27
			HALT C	H	S	.150	MG/L	27
	NACA	GW	HGL	H	P	5.000	MG/L	22

CHLORANIL								
118-75-2	USSR	DW	MPC	A	S	.010	MG/L	12

CHLORDANE								
57-74-9	AMMA	DW	ELLTC	H	P	.003	MG/L	23
			ELSTC	H	P	.060	MG/L	23
	CALIFORNIA ST. DHS	DW	AL	H	S	.055	UG/L	3
			MCL	H	P	.100	UG/L	31
	EPA	AMBIENT	AWQC	H	S	.460	MG/L **	9
		DW	DWEL	H	S	2.000	UG/L #	7
			HA1 C	H	S	63.000	UG/L	7
			HA10 C	H	S	63.000	UG/L	7
			MCL	H	P	.002	MG/L	34
			MCLG	H	P	.000	MG/L	8
	H&W	DW	MAC	H	S	.007	MG/L	5
	MOE	DW	MAC	H	S	.007	MG/L	1
	NEW YORK	GW	GWQS	H	S	.100	UG/L	16

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CHEMICAL								
CAS#	AGENCY	CATEGORY	LIMIT	LTYPE	STATUS	VALUE	UOM	REFCODE

CHLORDANE								
57-74-9	WHO	DW	GV	H	S	.300	UG/L	4

CHLORIDE								
	EPA	DW	SMCL	A	S	250.000	MG/L	28
	H&W	DW	AO	A	S	250.000	MG/L	5
	MOE	DW	MDC	A	S	250.000	MG/L	1
	NEW JERSEY	GW	GW1	A	S	10.000	MG/L	21
			GW2	A	S	250.000	MG/L	21
	NEW YORK	AMBIENT	AWQS	H	S	250,000.000	UG/L	16
		DW	MCL	H	S	250.000	MG/L	25
		GW	GWQS	H	S	250.000	MG/L	16
	WHO	DW	GV	A	S	250.000	MG/L	4

CHLORIDES								
	EEC	DW	GL	A	S	25.000	MG/L	6

CHLORINATED BENZENES								
	EPA	AMBIENT	AWQC	H	S	488.000	UG/L	9

CHLOROANILINE(PARA)								
106-47-8	USSR	DW	MPC	H	S	.200	MG/L	12

CHLOROBENZENE								
108-90-7	EPA	AMBIENT	AWQC	H	S	488.000	UG/L	9
		DW	HA LIFE	H	S	1,510.000	UG/L	7
			HA LIFE A	H	S	300.000	UG/L	7
			HA1 C	H	S	4,300.000	UG/L	7
			HA10 C	H	S	4,300.000	UG/L	7
			HALT A	H	S	15,000.000	UG/L	7
			HALT C	H	S	4,300.000	UG/L	7
			MCLG	H	P	.060	MG/L	8
	NEW YORK	AMBIENT	AWQS	A	S	20.000	UG/L	16
	USSR	DW	MPC	H	S	.020	MG/L	12

CHLOROETHYL ETHER (BIS-2)								
	EPA	AMBIENT	AWQC	H	S	.030	UG/L **	9

CHLOROFORM								
	EPA	DW	MCL	H	S	100.000	UG/L	11

67-66-3	EPA	AMBIENT	AWQC	H	S	.190	UG/L **	9

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CHEMICAL

CAS#	AGENCY	CATEGORY	LIMIT	LTYPE	STATUS	VALUE	UOM	REFCODE
CHLOROFORM								
67-66-3	EPA	DW	MCL	H	S	100.000	UG/L +	11
	NAS	DW	SNARL 7	H	S	3,200.000	UG/L	11
			SNARL CHR	H	S	3.120	UG/L **	11
	NEW YORK	AMBIENT	AWQS	H	S	.200	UG/L	16
		GW	GWQS	H	S	100.000	UG/L	16
	WHO	DW	GV	H	S	30.000	UG/L	4
CHLOROHEPTANOIC ACID								
	USSR	DW	MPC	A	S	.050	MG/L	12
CHLOROISOPROPYL(BIS-2)								
	EPA	AMBIENT	AWQC	H	S	.035	MG/L	9
CHLOROMETHYL ETHER (BIS)								
	EPA	AMBIENT	AWQC	H	S	.004	PG/L **	9
CHLORONAPHTHALENE(2)								
91-58-7	NEW YORK	AMBIENT	AWQS	C	S	10.000	UG/L	16
CHLORONITROCYCLOHEXANE								
	USSR	DW	MPC	A	S	.005	MG/L	12
CHLORONONANOIC ACID								
	USSR	DW	MPC	A	S	.300	MG/L	12
CHLOROPHOS								
	USSR	DW	MPC	A	S	.050	MG/L	12
CHLOROPRENE								
	USSR	DW	MPC	A	S	.100	MG/L	12
CHLOROPROPHAM								
	CALIFORNIA ST. DHS	DW	AL	H	S	.350	MG/L	3
CHLOROTHALONIL								
1897-45-6	EPA	DW	HA LIFE	H	S	.525	MG/L	27
			HA1 C	H	S	250.000	UG/L	27
			HA10 C	H	S	250.000	UG/L	27
			HALT A	H	S	.525	MG/L	27
			HALT C	H	S	150.000	UG/L	27
	NACA	GW	HGL	H	P	.150	MG/L	22

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CHEMICAL									
CAS#	AGENCY	CATEGORY	LIMIT	LTYPE	STATUS	VALUE	UOM	REFCODE	
CHS-2-1	USSR	DW	MPC	A	S	10.000	MG/L	12	
COBALT									
7440-48-4	USSR	DW	MPC	H	S	1.000	MG/L	12	
COLIFORMS									
EPA	DW	MCL	H	S	1.000	/100ML	28		
COLOUR									
EEC	DW	GL	A	S	1.000	MG/L	6		
		MADC	A	S	20.000	MG/L	6		
EPA	DW	SMCL	A	S	15.000	TCU	28		
H&W	DW	AO	A	S	15.000	TCU	5		
MOE	DW	MDC	A	S	5.000	TCU	1		
NEW YORK	DW	MCL	A	S	15.000	TCU	25		
WHO	DW	GV	A	S	15.000	TCU	4		
CONDUCTIVITY									
EEC	DW	GL	A	S	400.000	US/CM	6		
COPPER									
7440-50-8	EEC	DW	GL	A	S	100.000	UG/L	6	
	EPA	DW	MCL	H	P	1.300	MG/L	32	
			MCLG	H	P	1.300	MG/L	8	
			SMCL	A	S	1.000	MG/L	28	
	H&W	DW	AO	A	S	1.000	MG/L	5	
	MOE	DW	MDC	A	S	1.000	MG/L	1	
	NEW JERSEY	GW	GW1	A	S	1.000	MG/L	21	
			GW2	A	S	1.000	MG/L	21	
			GW3	A	S	1.000	MG/L	21	
	NEW YORK	AMBIENT	AWQS	H	S	200.000	UG/L	16	
		DW	MCL	A	S	1.000	MG/L	25	
		GW	GWQS	H	S	1.000	MG/L	16	
	USSR	DW	MPC	A	S	.100	MG/L	12	
	WHO	DW	GV	A	S	1.000	MG/L	4	
CRESYL DITHIOPHOSPHATE									
USSR	DW	MPC	A	S	.001	MG/L	12		
CROTONITRILE									
USSR	DW	MPC	H	S	.100	MG/L	12		

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CAS#	AGENCY	CATEGORY	LIMIT	LTYPE	STATUS	VALUE	UCM	REFCODE
CHEMICAL								

110-82-7	USSR	DW	MPC	H	S	.100	MG/L	12
CYCLOHEXANE								

108-93-0	USSR	DW	MPC	H	S	.500	MG/L	12
CYCLOHEXANOL								

502-42-1	USSR	DW	MPC	H	S	.200	MG/L	12
CYCLOHEXANONE								

	USSR	DW	MPC	H	S	1.000	MG/L	12
CYCLOHEXANONE OXIME								

110-83-8	USSR	DW	MPC	H	S	.020	MG/L	12
CYCLOHEXENE								

542-18-7	USSR	DW	MPC	A	S	.050	MG/L	12
CYCLOHEXYLCHLORIDE								

121-82-4	USSR	DW	MPC	H	S	.100	MG/L	12
CYCLONITE								

	NACA	GW	HGL	H	P	.075	MG/L	22
CYROMAZINE								

75-99-0	EPA	DW	HA LIFE	H	S	2.800	MG/L	27
DALAPON								

			HA LIFE A	H	S	.560	MG/L	27
			HA1 C	H	S	4.300	MG/L	27
			HA10 C	H	S	4.300	MG/L	27
			HALT A	H	S	2.800	MG/L	27
			HALT C	H	S	.800	MG/L	27
	USSR	DW	MPC	A	S	2.000	MG/L	12

96-12-8	EPA	DW	HA1 C	H	S	.200	MG/L	7
DBCP								

			HA10 C	H	S	.050	MG/L	7
	HAWAII	GW	LTAL	H	P	400.000	MG/L	19
			LTG	H	P	40.000	MG/L	19
			STAL	H	P	1,700.000	MG/L	19

1861-32-1	EPA	DW	HA LIFE	H	S	17.500	MG/L	27
DCPA								

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CHEMICAL								
CAS#	AGENCY	CATEGORY	LIMIT	LTYPE	STATUS	VALUE	UOM	REFCODE
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DIAZINON								
333-41-5	CALIFORNIA ST. DHS	DW	AL	H	S	14.000	UG/L	3
	EPA	DW	HA LIFE	H	S	.003	MG/L	27
			HA LIFE A	H	S	.630	UG/L	27
			HA1 C	H	S	.020	MG/L	27
			HA10 C	H	S	.020	MG/L	27
			HALT A	H	S	.018	MG/L	27
			HALT C	H	S	.005	MG/L	27
			SNAEL	H	S	.700	UG/L	10
	H&W	DW	MAC	H	S	.020	MG/L	5
	MOE	DW	MAC	H	S	.014	MG/L	1
	NACA	GW	HGL	H	P	.020	MG/L	22
	NEW YORK	GW	GWQS	H	S	.700	UG/L	16
DIBROMOCHLOROPROPANE								
CALIFORNIA ST. DHS	DW	AL	H	S	.001	MG/L	3	
	EPA	DW	MCL	H	P	.200	UG/L	34
			MCLG	H	P	.000	MG/L	8
DIBUTYL PHTHALATE								
84-74-2	EPA	AMBIENT	AWQC	H	S	35.000	MG/L	9
		DW	SNAEL	H	S	38.500	UG/L	10
DIBUTYL TIN CHLORIDE								
	USSR	DW	MPC	H	S	.002	MG/L	12
DIBUTYLTIN DILAURATE								
77-58-7	USSR	DW	MPC	H	S	.100	MG/L	12
DICAMBA								
1918-00-9	EPA	DW	HA LIFE	H	S	46.000	UG/L	27
			HA LIFE A	H	S	9.000	UG/L	27
			HA1 C	H	S	.300	MG/L	27
			HA10 C	H	S	.300	MG/L	27
			HALT A	H	S	50.000	UG/L	27
			HALT C	H	S	13.000	UG/L	27
			SNAEL	H	S	.440	UG/L	10
	H&W	DW	MAC	H	S	.120	MG/L	5
	MOE	DW	MAC	H	S	.120	MG/L	1
	NEW YORK	GW	GWQS	H	S	.440	UG/L	16
DICHLONE								
117-80-6	USSR	DW	MPC	H	S	.250	MG/L	12

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CHEMICAL

CAS#	AGENCY	CATEGORY	LIMIT	LTYPE	STATUS	VALUE	UOM	REFCODE
DICHLOROANILINE(2,5)								
95-82-9	USSR	DW	MPC	A	S	.050	MG/L	12
DICHLOROANILINE(3,4)								
95-76-1	USSR	DW	MPC	A	S	.050	MG/L	12
DICHLOBENZENE(1,2)								
95-50-1	CALIFORNIA ST. DHS	DW	AL	A	S	10.000	UG/L	3
				H	S	130.000	UG/L	3
	EPA	DW	HA LIFE	H	S	3.130	MG/L	7
			HA LIFE A	H	S	620.000	UG/L	7
			HA1 C	H	S	8.930	MG/L	7
			HA10 C	H	S	8.930	MG/L	7
			HALT A	H	S	31.250	MG/L	7
			HALT C	H	S	8.930	MG/L	7
			MCL	H	P	.600	MG/L	34
			MCLG	H	P	.620	MG/L	8
			SMCL	A	P	.010	MG/L	34
	H&W	DW	AO	A	S	.003	MG/L	5
			MAC	H	S	.200	MG/L	5
	MOE	DW	AO	A	S	.003	MG/L	1
			MAC	H	S	.200	MG/L	1
	USSR	DW	MPC	A	S	.002	MG/L	12
DICHLOBENZENE(1,3)								
541-73-1	CALIFORNIA ST. DHS	DW	AL	A	S	20.000	UG/L	3
				H	S	130.000	UG/L	3
	EPA	DW	HA LIFE	H	S	3.750	MG/L	7
			HA LIFE A	H	S	620.000	UG/L	7
			HA1 C	H	S	8.930	MG/L	7
			HA10 C	H	S	8.930	MG/L	7
			HALT A	H	S	31.250	MG/L	7
			HALT C	H	S	8.930	MG/L	7
	NEW YORK	AMBIENT	AWQS	H	S	20.000	UG/L	16
DICHLOBENZENE(1,4)								
106-46-7	CALIFORNIA ST. DHS	DW	AL	A	S	.300	UG/L	3
				H	S	130.000	UG/L	3
	EPA	DW	HA LIFE	H	S	3.750	MG/L	7
			HA LIFE A	H	S	.075	MG/L	7
			HA1 C	H	S	10.700	MG/L	7
			HA10 C	H	S	10.700	MG/L	7

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CHEMICAL								
CAS#	AGENCY	CATEGORY	LIMIT	LTYPE	STATUS	VALUE	UOM	REFCODE

DICHLOROBENZENE(1,4)								
106-46-7	EPA	DW	HALT A	H	S	37.500	MG/L	7
			HALT C	H	S	10.700	MG/L	7
			MCL	H	S	75.000	UG/L	20
			MCLG	H	S	750.000	UG/L	8
			SMCL	A	P	.005	MG/L	34
	N&W	DW	AO	A	S	.001	MG/L	5
			MAC	H	S	.005	MG/L	5
	MOE	DW	AO	A	S	.001	MG/L	1
			MAC	H	S	.005	MG/L	1
	NEW YORK	AMBIENT	AWQS	H	S	30.000	UG/L	16
	USSR	DW	MPC	A	S	.002	MG/L	12

DICHLOROBENZENES								
	EPA	AMBIENT	AWQC	H	S	400.000	UG/L	9

DICHLOROBENZIDINE								
	EPA	AMBIENT	AWQC	H	S	.010	UG/L **	9

DICHLOROBUTENE								
	USSR	DW	MPC	A	S	.050	MG/L	12

DICHLOROCYCLOHEXANE								
	USSR	DW	MPC	A	S	.020	MG/L	12

DICHLOROETHANE								
	USSR	DW	MPC	A	S	2.000	MG/L	12

DICHLOROETHANE(1,2)								
107-06-2	CALIFORNIA ST. DHS	DW	AL	H	S	1.000	UG/L	3
			MCL	H	P	5.000	UG/L	31
	EPA	AMBIENT	AWQC	H	S	.940	UG/L **	9
		DW	HA1 C	H	S	740.000	UG/L	7
			HA10 C	H	S	740.000	UG/L	7
			HALT A	H	S	2,600.000	UG/L	7
			HALT C	H	S	740.000	UG/L	7
			MCL	H	S	5.000	UG/L	20
			MCLG	H	S	.000	UG/L	8
	FLORIDA ST.	DW	MCL	H	S	3.000	UG/L	2
	N&W	DW	IMAC	H	S	.005	MG/L	5
	MOE	DW	MAC	H	S	.005	MG/L	1
	NAS	DW	SNARL CHR	H	S	1.420	UG/L **	11

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CHEMICAL

CAS#	AGENCY	CATEGORY	LIMIT	LTYPE	STATUS	VALUE	UOM	REFCODE
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DICHLOROETHANE(1,2)								
107-06-2	NEW YORK	AMBIENT	AWQS	H	S	.800	UG/L	16
	WHO	DW	GV	H	S	10.000	UG/L	4
DICHLOROETHYLENE(1,1)								
75-35-4	CALIFORNIA ST. DHS	DW	AL	H	S	.100	UG/L	3
	EPA	DW	HA LIFE	H	S	350.000	UG/L	7
			HA LIFE A	H	S	7.000	UG/L	7
			HA1 C	H	S	2,000.000	UG/L	7
			HA10 C	H	S	1,000.000	UG/L	7
			HA1T A	H	S	3,500.000	UG/L	7
			HA1T C	H	S	1,000.000	UG/L	7
			MCL	H	S	7.000	UG/L	20
			MCLG	H	S	7.000	UG/L	8
	WHO	DW	GV	H	S	.300	UG/L	4
DICHLOROETHYLENE(1,2-CIS)								
156-59-2	CALIFORNIA ST. DHS	DW	MCL	H	P	6.000	UG/L	31
	EPA	DW	HA LIFE	H	S	.350	MG/L	7
			HA LIFE A	H	S	70.000	UG/L	7
			HA1 C	H	S	4.000	MG/L	7
			HA10 C	H	S	1.000	MG/L	7
			HA1T A	H	S	3.500	MG/L	7
			HA1T C	H	S	1.000	MG/L	7
			MCL	H	P	.070	MG/L	34
			MCLG	H	P	.070	MG/L	8
DICHLOROETHYLENE(1,2-TRANS)								
156-60-5	CALIFORNIA ST.DHS	DW	MCL	H	P	10.000	UG/L	31
	EPA	DW	HA LIFE	H	S	350.000	UG/L	7
			HA LIFE A	H	S	70.000	UG/L	7
			HA1 C	H	S	20,000.000	UG/L	7
			HA10 C	H	S	1,430.000	UG/L	7
			HA1T A	H	S	5,000.000	UG/L	7
			HA1T C	H	S	1,430.000	UG/L	7
			MCL	H	P	.070	MG/L	34
			MCLG	H	P	.070	MG/L	8
DICHLOROETHYLENES								
	EPA	AMBIENT	AWQC	H	S	.033	UG/L **	9
DICHLOROHYDRIN								
	USSR	DW	MPC	A	S	1.000	MG/L	12

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CHEMICAL								
CAS#	AGENCY	CATEGORY	LIMIT	LTYPE	STATUS	VALUE	UOM	REFCODE

DICHLOROPHENOL								
	USSR	DW	MPC	A	S	.002	MG/L	12

DICHLOROPHENOL(2,4)								
120-83-2	EPA	AMBIENT	AWQC	H	S	3.090	MG/L	9
	H&W	DW	AO	A	S	.300	UG/L	5
			MAC	H	S	.900	MG/L	5
	MOE	DW	AO	A	S	.300	UG/L	1
			MAC	H	S	.900	MG/L	1
	NEW YORK	AMBIENT	AWQS	A	S	.300	UG/L	16

DICHLOROPROPANE(1,2)								
78-87-5	CALIFORNIA ST. DHS	DW	AL	H	S	10.000	UG/L	3
			MCL	H	P	5.000	UG/L	31
	EPA	DW	HA10 C	H	S	90.000	UG/L	7
			MCL	H	P	.005	MG/L	34
			MCLG	H	P	.006	MG/L	8
			SMCL	A	P	.005	MG/L	34

DICHLOROPROPENE								
	EPA	AMBIENT	AWQC	H	S	87.000	UG/L	9

DICHLOROPROPENE(1,3)								
542-75-6	EPA	DW	HA LIFE	H	S	11.000	UG/L	27
			HA1 C	H	S	30.000	UG/L	27
			HA10 C	H	S	30.000	UG/L	27
			HA1T A	H	S	105.000	UG/L	27
			HA1T C	H	S	30.000	UG/L	27

DICHLOROVINYL DIMETHYL PHOSPHATE								
	USSR	DW	MPC	A	S	1.000	MG/L	12

DICLOFOP-METHYL								
	H&W	DW	MAC	H	S	.009	MG/L	5
	MOE	DW	MAC	H	S	.009	MG/L	1

DICYANODIAMIDE								
461-58-5	USSR	DW	MPC	A	S	10.000	MG/L	12

DIELDRIIN								
60-57-1	AWWA	DW	ELLTC	H	P	.017	MG/L	23
			ELSTC	H	P	.050	MG/L	23

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CHEMICAL								
CAS#	AGENCY	CATEGORY	LIMIT	LTYPE	STATUS	VALUE	UOM	REFCODE
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DIELDRIN								
60-57-1	CALIFORNIA ST. DHS EPA	DW	AL	H	S	.050	UG/L	3
		AMBIENT	AWQC	H	S	.071	NG/L **	9
		DW	MA LIFE	H	S	1.750	UG/L	27
			MA1 C	H	S	.500	UG/L	27
			MA10 C	H	S	.500	UG/L	27
			MALT C	H	S	.500	UG/L	27
	NAS	DW	SNARL CHR	H	S	3.840	NG/L	11
DIETHANOLAMINE								
111-42-2	USSR	DW	MPC	A	S	.800	MG/L	12
DIETHYL ETHER								
60-29-7	MOL	DW	SG	A	P	.300	MG/L	15
	USSR	DW	MPC	A	S	.300	MG/L	12
DIETHYL ETHER MALEATE								
	USSR	DW	MPC	H	S	1.000	MG/L	12
DIETHYL MERCURY								
	USSR	DW	MPC	H	S	.100	UG/L	12
DIETHYL PHOSPHORODITHOIC ACID								
	USSR	DW	MPC	A	S	.200	MG/L	12
DIETHYL PHTHALATE								
84-66-2	EPA	AMBIENT	AWQC	H	S	350.000	MG/L	9
DIETHYLAMINE								
109-89-7	USSR	DW	MPC	H	S	2.000	MG/L	12
DIETHYLENEGLYCOL								
111-46-6	USSR	DW	MPC	H	S	1.000	MG/L	12
DIETHYLTIN DICAPRYLATE								
	USSR	DW	MPC	H	S	.010	MG/L	12
DIISOBUTYLAMINE								
	USSR	DW	MPC	A	S	.070	MG/L	12
DIISOPROPYLAMINE								
108-18-9	USSR	DW	MPC	H	S	.500	MG/L	12

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CHEMICAL								
CAS#	AGENCY	CATEGORY	LIMIT	LTYPE	STATUS	VALUE	UOM	REFCODE
	DIISOPROPYLBENZENE(PARA)							
	USSR	DW	MPC	H	S	.050	MG/L	12
	DIKOTEX							
	USSR	DW	MPC	A	S	.250	MG/L	12
	DIMETHOATE							
60-51-5	CALIFORNIA ST. DHS	DW	AL	H	S	.140	MG/L	3
	H&W	DW	IMAC	H	S	.020	MG/L	5
	MOE	DW	IMAC	H	S	.020	MG/L	1
	DIMETHRIN							
67239-16-1	EPA	DW	HA LIFE	H	S	10.500	MG/L	27
			HA LIFE A	H	S	2.100	MG/L	27
			HA1 C	H	S	12.000	MG/L	27
			HA10 C	H	S	12.000	MG/L	27
			HA1T A	H	S	42.000	MG/L	27
			HA1T C	H	S	12.000	MG/L	27
	DIMETHYL PHENOL(2,4)							
105-67-9	CALIFORNIA ST. DHS	DW	AL	H	S	.400	MG/L	3
	DIMETHYL PHTHALATE							
131-11-3	EPA	AMBIENT	AWQC	H	S	313.000	MG/L	9
	DIMETHYL TEREPHTHALATE							
120-61-6	USSR	DW	MPC	A	S	1.500	MG/L	12
	DIMETHYLAMINE							
124-40-3	USSR	DW	MPC	H	S	.100	MG/L	12
	DIMETHYLDIOXANE							
	USSR	DW	MPC	H	S	.005	MG/L	12
	DIMETHYLDITHIOCARBAMATE							
	USSR	DW	MPC	H	S	.500	MG/L	12
	DIMETHYLDITHIOPHOSPHORIC ACID							
	USSR	DW	MPC	A	S	.100	MG/L	12
	DIMETHYLPHENYLCARBINOL							
	USSR	DW	MPC	H	S	.050	MG/L	12

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CHEMICAL								
CAS#	AGENCY	CATEGORY	LIMIT	LTYPE	STATUS	VALUE	UOM	REFCODE
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	DINITRO-O-CRESOL(2,4)							
	EPA	AMBIENT	AWQC	H	S	13.400	UG/L	9
	DINITROBENZENE							
	USSR	DW	MPC	A	S	.500	MG/L	12
	DINITROCHLOROBENZENE							
	USSR	DW	MPC	A	S	.500	MG/L	12
	DINITRONAPHTHALENE							
	USSR	DW	MPC	A	S	1.000	MG/L	12
	DINITROPHENOL							
	NIOSH	DW	SNARL CHR	H	S	.110	MG/L	24
	DINITROPHENOL(2,4)							
51-28-5	USSR	DW	MPC	H	S	.030	MG/L	12
	DINITROPHENOLS							
	EPA	AMBIENT	AWQC	H	S	70.000	UG/L	9
	DINITROTOLUENE(2,4)							
	EPA	AMBIENT	AWQC	H	S	.110	UG/L **	9
	DINOSEB							
88-85-7	EPA	DW	HA LIFE	H	S	35.000	UG/L	27
			HA LIFE A	H	S	7.000	UG/L	27
			HA1 C	H	S	.300	MG/L	27
			HA10 C	H	S	.300	MG/L	27
			HALT A	H	S	35.000	UG/L	27
			HALT C	H	S	10.000	UG/L	27
	DIOXANE(PARA)							
	EPA	DW	HA1 C	H	S	4.120	MG/L	7
			HA10 C	H	S	.412	MG/L	7
	DIOXIN(D2CDD)							
	MOE	DW	IMAC	H	P	15,000.000	PG/L ++	18
	DIOXIN(H6CDD)							
	MOE	DW	IMAC	H	P	150.000	PG/L ++	18

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CHEMICAL		CAS#	AGENCY	CATEGORY	LIMIT	LTYPE	STATUS	VALUE	UOM	REFCODE
DIOXIN(H7CDD)										
	MOE		DW	IMAC	H	P	1,500.000	PG/L	++	18
DIOXIN(H1CDD)										
	MOE		DW	IMAC	H	P	150,000.000	PG/L	++	18
DIOXIN(O8CDD)										
	MOE		DW	IMAC	H	P	150,000.000	PG/L	++	18
DIOXIN(P5CDD)										
	MOE		DW	IMAC	H	P	150.000	PG/L	++	18
DIOXIN(T3CDD)										
	MOE		DW	IMAC	H	P	1,500.000	PG/L	++	18
DIOXIN(T4CDD)										
	MOE		DW	IMAC	H	P	1,500.000	PG/L	++	18
DIOXIN(T4CDD-2,3,7,8)										
1746-01-6	EPA	AMBIENT	AWQC	H	S	.010	PG/L	**		9
		DW	DWEL	H	S	.035	NG/L			7
			HA1 C	H	S	1.000	NG/L			7
			HA10 C	H	S	.100	NG/L			7
			HALT A	H	S	.035	NG/L			7
			HALT C	H	S	.010	NG/L			7
	MOE	DW	IMAC	H	P	15.000	PG/L	++		18
	NEW YORK	GW	GWQS	H	S	.035	NG/L			16
DIOXIN(TCDD)										
	EPA	DW	SNAEL	H	S	.035	NG/L			10
DIPHENAMID										
957-51-7	CALIFORNIA ST. DHS	DW	AL	H	S	.040	NG/L			3
	EPA	DW	HA LIFE	H	S	1.000	NG/L			27
			HA LIFE A	H	S	.200	NG/L			27
			HA1 C	H	S	.300	NG/L			27
			HA10 C	H	S	.300	NG/L			27
			HALT C	H	S	.300	NG/L			27
DIPHENYLHYDRAZINE										
122-66-7	EPA	AMBIENT	AWQC	H	S	42.000	NG/L	**		9

CAS#	AGENCY	CATEGORY	LIMIT	LTYPE	STATUS	VALUE	UOM	REFCODE
CHEMICAL								
	DIPHENYLOLPROPANE							
	USSR	DW	MPC	A	S	.010	MG/L	12
DIPROPYLAMINE								
142-84-7	USSR	DW	MPC	A	S	.500	MG/L	12
DIQUAT								
85-00-7	H&W	DW	MAC	H	S	.070	MG/L	5
	MOE	DW	MAC	H	S	.070	MG/L	1
DIQUAT DIBROMIDE								
	NACA	GW	HGL	H	P	.050	MG/L	22
DISODIUM MONOALKYLSULFOSUCCINATE								
	USSR	DW	MPC	A	S	.500	MG/L	12
DISULFOTON								
298-04-4	EPA	DW	HA LIFE	H	S	1.000	UG/L	27
			HA LIFE A	H	S	.300	UG/L	27
			HA1 C	H	S	10.000	UG/L	27
			HA10 C	H	S	10.000	UG/L	27
			HALT A	H	S	9.000	UG/L	27
			HALT C	H	S	3.000	UG/L	27
			SNAEL	H	S	.035	UG/L	10
	NACA	GW	HGL	H	P	.025	MG/L	22
DITHANE								
	NEW YORK	GW	GWQS	H	S	1.750	UG/L	16
DIURON								
330-54-1	EPA	DW	HA LIFE	H	S	.070	MG/L	27
			HA LIFE A	H	S	.014	MG/L	27
			HA1 C	H	S	1.000	MG/L	27
			HA10 C	H	S	1.000	MG/L	27
			HALT A	H	S	.880	MG/L	27
			HALT C	H	S	.250	MG/L	27
	H&W	DW	MAC	H	S	.150	MG/L	5
	MOE	DW	MAC	H	S	.150	MG/L	1
	NACA	GW	HGL	H	P	.063	MG/L	22
	USSR	DW	MPC	A	S	1.000	MG/L	12
DRY RESIDUE								
	EEC	DW	MADC	A	S	1,500.000	MG/L	6

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CHEMICAL								
CAS#	AGENCY	CATEGORY	LIMIT	LTYPE	STATUS	VALUE	UOM	REFCODE
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ETHER SULFONATE								
	USSR	DW	MPC	A	S	.200	MG/L	12
ETHION								
563-12-2	CALIFORNIA ST. DHS	DW	AL	H	S	.035	MG/L	3
	HACA	GW	HGL	H	P	.050	MG/L	22
ETHYL ACRYLATE								
140-88-5	USSR	DW	MPC	A	S	.005	MG/L	12
ETHYL BENZENE								
100-41-4	EPA	AMBIENT	AWQC	H	S	1.400	MG/L	9
		DW	HA LIFE	H	S	3,400.000	UG/L	7
			HA LIFE A	H	S	680.000	UG/L	7
			HA1 C	H	S	32,000.000	UG/L	7
			HA10 C	H	S	3,200.000	UG/L	7
			HALT C	H	S	.970	MG/L	7
			MCL	H	P	.700	MG/L	34
			MCLG	H	P	.680	MG/L	8
			SMCL	A	P	.030	MG/L	34
	H&W	DW	AO	A	S	2.400	UG/L	5
	MOE	DW	AO	H	S	2.400	UG/L	1
	USSR	DW	MPC	A	S	.010	UG/L	12
ETHYLAMINE								
75-04-7	USSR	DW	MPC	A	S	.500	MG/L	12
ETHYLENE								
74-85-1	USSR	DW	MPC	A	S	.500	MG/L	12
ETHYLENE CHLOROHYDRIN								
107-07-3	AWWA	DW	ELSTC	H	P	2.000	MG/L	23
ETHYLENE DIBROMIDE								
106-93-4	CALIFORNIA ST. DHS	DW	AL	H	S	.050	UG/L	3
	EPA	DW	HA1 C	H	S	.008	MG/L	7
			HA10 C	H	S	.008	MG/L	7
			MCL	H	P	.050	UG/L	34
			MCLG	H	P	.000	MG/L	8
	FLORIDA ST.	DW	MCL	H	S	.020	UG/L	2
	HAWAII	GW	LTAL	H	P	20.000	MG/L	19
			LTG	H	P	2.000	MG/L	19

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CHEMICAL								
CAS#	AGENCY	CATEGORY	LIMIT	LTYPE	STATUS	VALUE	UOM	REFCODE

ETHYLENE DIBROMIDE								
106-93-4	HAWAII	GW	STAL	H	P	85.000	MG/L	19
ETHYLENE GLYCOL								
107-21-1	EPA	DW	DWEL	H	S	35,000.000	UG/L	7
			HA LIFE A	H	S	7,000.000	UG/L	7
			HA1 C	H	S	19,000.000	UG/L	7
			HA10 C	H	S	5,500.000	UG/L	7
			HALT A	H	S	19,250.000	UG/L	7
			HALT C	H	S	5,500.000	UG/L	7
	USSR	DW	MPC	H	S	1.000	MG/L	12
ETHYLENE THIOUREA								
96-45-7	EPA	DW	HA LIFE	H	S	1.050	UG/L	27
			HA1 C	H	S	.250	MG/L	27
			HA10 C	H	S	.250	MG/L	27
			HALT A	H	S	.440	MGL	27
			HALT C	H	S	.125	MG/L	27
ETHYLMERCURIC CHLORIDE								
107-27-7	USSR	DW	MPC	H	S	.100	UG/L	12
FECAL COLIFORMS								
	EEC	DW	MADC	H	S	.000	COUNT/ML	6
	H&W	DW	MAC	H	S	.000	COUNT/ML	28
FECAL STREPTOCOCCI								
	EEC	DW	MADC	H	S	.000	COUNT/ML	6
FENAMIPHOS								
22224-92-6	EPA	DW	HA LIFE	H	S	9.000	UG/L	27
			HA LIFE A	H	S	1.800	UG/L	27
			HA1 C	H	S	9.000	UG/L	27
			HA10 C	H	S	9.000	UG/L	27
			HALT A	H	S	18.000	UG/L	27
			HALT C	H	S	5.000	UG/L	27
	NACA	GW	HGL	H	P	.025	MG/L	22
FENSULFOTHION								
115-90-2	NACA	GW	HGL	H	P	.018	MG/L	22
FENTHION								
55-38-9	NACA	GW	HGL	H	P	.075	MG/L	22

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CHEMICAL								
CAS#	AGENCY	CATEGORY	LIMIT	LTYPE	STATUS	VALUE	UOM	REFCODE

FERBAN								
	NEW YORK	GW	GWQS	H	S	4.180	UG/L	16

FERROCYANIDES								
	USSR	DW	MPC	H	S	1.250	MG/L	12

FLUCHLORALIN								
	NACA	GW	HGL	H	P	.030	MG/L	22

FLUOMETURON								
2164-17-2	EPA	DW	HA LIFE	H	S	.438	MG/L	27
			HA LIFE A	H	S	.090	MG/L	27
			HA1 C	H	S	1.500	MG/L	27
			HA10 C	H	S	1.500	MG/L	27
			HA1T A	H	S	5.300	MG/L	27
			HA1T C	H	S	1.500	MG/L	27

FLUORANTHENE								
206-44-0	EPA	AMBIENT	AWQC	H	S	42.000	UG/L	9

FLUORIDE								
	EEC	DW	MADC	A	S	700.000	UG/L	6
	EPA	DW	MCL	H	S	4.000	MG/L	28
			SMCL	A	S	2.000	MG/L	28
	H&W	DW	MAC	H	S	1.500	MG/L	5
	MOE	DW	MAC	H	S	1.500	MG/L	1
	NEW JERSEY	GW	GW1	A	S	2.000	MG/L	21
			GW2	A	S	2.000	MG/L	21
			GW3	A	S	2.000	MG/L	21
	NEW YORK	AMBIENT	AWQS	H	S	1,500.000	UG/L	16
		DW	MCL	H	S	2.200	MG/L	25
		GW	GWQS	H	S	1.500	MG/L	16
	USSR	DW	MPC	H	S	1.500	MG/L	12
	WHO	DW	GV	H	S	1.500	MG/L	4

FLUORINE								
7782-41-4	USSR	DW	MPC	H	S	1.500	MG/L	12

FOAMING AGENTS								
	EPA	DW	SMCL	A	S	.500	MG/L	28
	NEW JERSEY	GW	GW1	A	S	.500	MG/L	21
			GW2	A	S	.500	MG/L	21

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CHEMICAL								
CAS#	AGENCY	CATEGORY	LIMIT	LTYPE	STATUS	VALUE	UOM	REFCODE

FURAN(T4CDF)								
	MOE	DW	IMAC	H	P	30.000	PG/L ++	18

FURFUROL								
	USSR	DW	MPC	A	S	1.000	MG/L	12

GLYPHOSATE								
1071-83-6	CALIFORNIA ST. DHS	DW	MCL	H	P	700.000	UG/L	31
	EPA	DW	HA LIFE	H	S	3.500	MG/L	27
			HA LIFE A	H	S	.700	MG/L	27
			HA1 C	H	S	17.500	MG/L	27
			HA10 C	H	S	17.500	MG/L	27
	H&W	DW	IMAC	H	S	.280	MG/L	5
	MOE	DW	IMAC	H	S	.280	MG/L	1

GROSS ALPHA RADIATION								
	EPA	DW	MCL	H	S	15.000	PCI/L	28
	NEW YORK	AMBIENT	AWQS	H	S	15.000	PCI/L	16

GROSS BETA RADIATION								
	NEW YORK	AMBIENT	AWQS	H	S	1,000.000	PCI/L	16

HALOMETHANES								
	EPA	AMBIENT	AWQC	H	S	.190	UG/L **	9

HCB								
	EPA	DW	SNAEL	H	S	.350	UG/L	10

HEPTACHLOR								
76-44-8	AWMA	DW	ELLTC	H	P	.018	MG/L	23
			ELSTC	H	P	.100	MG/L	23
	CALIFORNIA ST. DHS	DW	AL	H	S	.020	UG/L	3
	EPA	AMBIENT	AWQC	H	S	.280	NG/L **	9
		DW	DWEL	H	S	17.500	UG/L	7
			HA1 C	H	S	.010	MG/L	7
			HA10 C	H	S	.010	MG/L	7
			HA1 C	H	S	1.500	UG/L	7
			MCL	H	P	.400	UG/L	34
			MCLG	H	P	.000	MG/L	8
	USSR	DW	MPC	H	S	.050	MG/L	12
	WHO	DW	GV	H	S	.100	UG/L	4

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CHEMICAL

CAS#	AGENCY	CATEGORY	LIMIT	LTYPE	STATUS	VALUE	UOM	REFCODE

HEPTACHLOR & HEPTACHLOR EPOXIDE								
76-44-8+HE	CALIFORNIA ST. DHS	DW	MCL	H	P	.010	UG/L	31
	H&W	DW	MAC	H	S	.003	MG/L	5
	MOE	DW	MAC	H	S	.003	MG/L	1
	NEW YORK	AMBIENT	AWQS	H	S	.009	UG/L	16
	WHO	DW	GV	H	S	.100	UG/L	4

HEPTACHLOR EPOXIDE								
1042-57-3	AWWA	DW	ELLTC	H	P	.018	MG/L	23
			ELSTC	H	P	.050	MG/L	23
	CALIFORNIA ST. DHS	DW	AL	H	S	.100	UG/L	3
	EPA	DW	DWEL	H	S	.400	UG/L	7
			HA1 C	H	S	.010	MG/L	7
			HA10 C	H	S	.010	MG/L	7
			HALT C	H	S	1.500	UG/L	7
			MCL	H	P	.200	UG/L	34
			MCLG	H	P	.000	MG/L	8

HEPTYL ALCOHOL								
	USSR	DW	MPC	H	S	.005	MG/L	12

HEXACHLORANE								
	USSR	DW	MPC	A	S	.020	MG/L	12

HEXACHLOROBENZENE								
118-74-1	EPA	AMBIENT	AWQC	H	S	.720	MG/L **	9
		DW	DWEL	H	S	28.000	UG/L	7
			HA1 C	H	S	50.000	UG/L	7
			HA10 C	H	S	50.000	UG/L	7
			HALT A	H	S	175.000	UG/L	7
			HALT C	H	S	50.000	UG/L	7
	NEW YORK	GW	GWQS	H	S	.350	UG/L	16
	USSR	DW	MPC	H	S	.050	MG/L	12
	WHO	DW	GV	H	S	.010	UG/L	4

HEXACHLOROBUTADIENE								
87-68-3	EPA	AMBIENT	AWQC	H	S	.450	UG/L **	9
	NEW YORK	AMBIENT	AWQS	H	S	.500	UG/L	16
	USSR	DW	MPC	A	S	.010	MG/L	12

HEXACHLOROBUTANE								
	USSR	DW	MPC	A	S	.010	MG/L	12

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CHEMICAL								
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HEXACHLOROCYCLOPENTADIENE								
77-47-4	EPA	AMBIENT	AWQC	H	S	206.000	UG/L	9
	NEW YORK	AMBIENT	AWQS	H	S	1.000	UG/L	16
	USSR	DW	MPC	A	S	.001	MG/L	12

HEXACHLOROETHANE								
67-72-1	EPA	AMBIENT	AWQC	H	S	1.900	UG/L	9
	USSR	DW	MPC	A	S	.010	MG/L	12

HEXACHLOROPHENE								
70-30-4	EPA	DW	SNAEL	H	S	.350	UG/L	10
	NEW YORK	GW	GWQS	H	S	7.000	UG/L	16

HEXAMETHYLENE DIAMINE								
124-09-4	USSR	DW	MPC	H	S	.010	MG/L	12

HEXANATE								
	USSR	DW	MPC	H	S	5.000	MG/L	12

HEXANE								
110-54-3	EPA	DW	HA1 C	H	S	13.000	MG/L	7
			HA10 C	H	S	4.000	MG/L	7
			HA1T A	H	S	14.000	MG/L	7
			HA1T C	H	S	4.000	MG/L	7

HEXAZINONE								
51235-04-2	EPA	DW	HA LIFE	H	S	1.050	MG/L	27
			HA LIFE A	H	S	.210	MG/L	27
			HA1 C	H	S	2.500	MG/L	27
			HA10 C	H	S	2.500	MG/L	27
			HA1T A	H	S	8.750	MG/L	27
			HA1T C	H	S	2.500	MG/L	27
	NACA	GW	HGL	H	P	.125	MG/L	22

HYDRAZINE								
302-01-2	USSR	DW	MPC	H	S	.010	MG/L	12

HYDROQUINONE								
123-31-9	USSR	DW	MPC	A	S	.200	UG/L	12

IODINE-131								
	H&W	DW	MAC	H	S	10.000	BECQ/L	5

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CHEMICAL -----									
CAS# ----	AGENCY -----	CATEGORY -----	LIMIT -----	LTYPE -----	STATUS -----	VALUE -----	UOM ---	REFCODE -----	
IODINE-131									
	MOE	DW	MAC	H	S	10.000	BECQ/L	1	
IRON									
7439-89-6	EEC	DW	GL	A	S	50.000	UG/L	6	
			MADC	A	S	200.000	UG/L	6	
	EPA	AMBIENT	AWQC	H	S	.300	MG/L	9	
		DW	SMCL	A	S	.300	MG/L	28	
	H&W	DW	AO	A	S	.300	MG/L	5	
	MOE	DW	MDC	A	S	.300	MG/L	1	
	NEW JERSEY	GW	GW1	A	S	.300	MG/L	21	
			GW2	A	S	.300	MG/L	21	
			GW3	A	S	.300	MG/L	21	
	NEW YORK	AMBIENT	AWQS	H	S	300.000	UG/L	16	
		DW	MCL	H	S	.300	MG/L	25	
		GW	GWQS	H	S	.300	MG/L	16	
	USSR	DW	MPC	A	S	.500	MG/L	12	
				H	S	.500	MG/L	12	
	WHO	DW	GV	A	S	.300	MG/L	4	
ISOBUTYLENE									
115-11-7	USSR	DW	MPC	A	S	.500	MG/L	12	
ISOCROTONITRILE									
	USSR	DW	MPC	H	S	.100	MG/L	12	
ISOFENPHOS									
	NACA	GW	HGL	H	P	.050	MG/L	22	
ISOPHORONE									
78-59-1	EPA	AMBIENT	AWQC	H	S	5.200	MG/L	9	
ISOPRENE									
78-79-5	USSR	DW	MPC	A	S	.005	MG/L	12	
ISOPROPYLAMINE									
75-31-0	USSR	DW	MPC	H	S	2.000	MG/L	12	
ISOPROPYLBENZENE HYDROPEROXIDE									
	USSR	DW	MPC	H	S	.500	MG/L	12	
ISOPROPYLCHLOROPHENYL CARBAMATE									
	USSR	DW	MPC	A	S	1.000	MG/L	12	

***** PALIS SYSTEM PARAMETER REPORT---10/16/90 *****

CHEMICAL								
CAS#	AGENCY	CATEGORY	LIMIT	LTYPE	STATUS	VALUE	UOM	REFCODE
----	-----	-----	-----	-----	-----	-----	---	-----
ISOPROPYLPHENYL CARBAMATE								
	USSR	DW	MPC	A	S	.200	MG/L	12
KEROSENE								
8008-20-6	USSR	DW	MPC	A	S	.100	MG/L	12
KJELDAHL NITROGEN								
	EEC	DW	MADC	A	S	1.000	MG/L	6
LEAD								
7439-92-1	EEC	DW	MADC	H	S	50.000	UG/L	6
	EPA	AMBIENT	AWQC	H	S	50.000	UG/L	9
		DW	HA LIFE	H	S	.020	UG/L	7
			HA1 A	H	S	.020	MG/L	7
			MCL	H	S	.050	MG/L	13
			MCLG	H	P	.000	MG/L	32
	FLORIDA ST.	DW	MCL	H	S	.050	MG/L	2
	H&W	DW	MAC	H	S	.010	MG/L	5
	MOE	DW	MAC	H	S	.010	MG/L	1
	NEW YORK	AMBIENT	AWQS	H	S	50.000	UG/L	16
		DW	MCL	H	S	.050	MG/L	25
		GW	GWQS	H	S	.025	MG/L	16
	USSR	DW	MPC	H	S	.100	MG/L	12
	WHO	DW	GV	H	S	.050	MG/L	4
LEAD AND COMPOUNDS								
7439-92-1+	NEW JERSEY	GW	GW1	A	S	.050	MG/L	21
			GW2	A	S	.050	MG/L	21
			GW3	A	S	.050	MG/L	21
LINDANE								
58-89-9	AMMA	DW	ELLTC	H	P	.056	MG/L	23
			ELSTC	H	P	2.000	MG/L	23
	EPA	AMBIENT	AWQC	H	S	18.600	MG/L **	9
		DW	HA LIFE	H	S	.010	MG/L	7
			HA LIFE A	H	S	.200	UG/L	7
			HA1 C	H	S	1.200	MG/L	7
			HA10 C	H	S	1.200	MG/L	7
			HA1 A	H	S	.120	MG/L	7
			HA1 C	H	S	.033	MG/L	7
			MCL	H	S	.400	UG/L	28
			MCLG	H	P	.200	UG/L	8

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CHEMICAL

CAS#	AGENCY	CATEGORY	LIMIT	LTYPE	STATUS	VALUE	UOM	REFCODE
LINDANE								
58-89-9	FLORIDA ST.	DW	MCL	H	S	.004	MG/L	2
	H&W	DW	MAC	H	S	.004	MG/L	5
	MOE	DW	MAC	H	S	.004	MG/L	1
	NAS	DW	SNARL 7	H	S	500.000	UG/L	11
	NEW YORK	DW	MCL	H	S	4.000	UG/L	25
	WHO	DW	GV	H	S	.003	MG/L	4
LINURON								
330-55-2	NACA	GW	HGL	H	P	.063	MG/L	22
LUTIDINE(2,5)								
	USSR	DW	MPC	H	S	.050	MG/L	12
M-81								
	USSR	DW	MPC	A	S	.001	MG/L	12
M-CHLOROANILINE								
108-42-9	USSR	DW	MPC	H	S	.200	MG/L	12
M-DIISOPROPYLBENZENE								
	USSR	DW	MPC	H	S	.050	MG/L	12
M-NITROPHENOL								
554-84-7	NIOSH	DW	SNARL 7	H	S	.290	MG/L	24
	USSR	DW	MPC	H	S	.060	MG/L	12
MAGNESIUM								
7439-95-4	EEC	DW	GL	A	S	30.000	MG/L	6
			MADC	A	S	50.000	MG/L	6
	NEW YORK	AMBIENT	AWQS	H	S	35,000.000	UG/L	16
MALATHION								
121-75-5	CALIFORNIA ST. DHS	DW	AL	H	S	160.000	UG/L	3
	EPA	DW	SNAEL	H	S	7.000	UG/L	10
	H&W	DW	MAC	H	S	.190	MG/L	5
	MOE	DW	MAC	H	S	.190	MG/L	1
	NEW YORK	GW	GWQS	H	S	7.000	UG/L	16
MALEIC ACID								
110-16-7	USSR	DW	MPC	A	S	1.000	MG/L	12

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CHEMICAL								
CAS#	AGENCY	CATEGORY	LIMIT	LTYPE	STATUS	VALUE	UOM	REFCODE

MALEIC HYDRAZIDE								
123-33-1	EPA	DW	HA LIFE	H	S	17.500	MG/L	27
			HA LIFE A	H	S	3.500	MG/L	27
			HA1 C	H	S	10.000	MG/L	27
			HA10 C	H	S	10.000	MG/L	27
			HALT A	H	S	17.500	MG/L	27
			HALT C	H	S	5.000	MG/L	27

MANEB								
	NEW YORK	GW	GWQS	H	S	1.750	UG/L	16

MANEB(&ZINEB)								
	EPA	DW	SNAEL	H	S	1.750	UG/L	10

MANGANESE								
7439-96-5	EEC	DW	GL	A	S	20.000	UG/L	6
			MADC	A	S	50.000	UG/L	6
	EPA	AMBIENT	AWQC	H	S	50.000	UG/L	9
		DW	SMCL	A	S	.050	MG/L	28
	H&W	DW	AO	A	S	.050	MG/L	5
	MOE	DW	MDC	A	S	.050	MG/L	1
	NEW JERSEY	GW	GW1	A	S	.050	MG/L	21
			GW2	A	S	.050	MG/L	21
			GW3	A	S	.050	MG/L	21
	NEW YORK	AMBIENT	AWQS	H	S	300.000	UG/L	16
		DW	MCL	H	S	.300	MG/L	25
		GW	GWQS	H	S	.300	MG/L	16
	WHO	DW	GV	A	S	.100	MG/L	4

MERCAPTODIETHYLAMINE(BETA)								
	USSR	DW	MPC	A	S	.100	MG/L	12

MERCURY								
7439-97-6	EEC	DW	MADC	H	S	1.000	UG/L	6
	EPA	AMBIENT	AWQC	H	S	144.000	MG/L	9
		DW	HA LIFE	H	S	5.500	UG/L	7
			HA LIFE A	H	S	1.100	UG/L	7
			HA1 C	H	S	1.580	UG/L	7
			HA10 C	H	S	1.580	UG/L	7
			HALT C	H	S	1.580	UG/L	7
			MCL	H	S	.002	MG/L	28
			MCLG	H	P	.003	MG/L	8

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CHEMICAL								
CAS#	AGENCY	CATEGORY	LIMIT	LTYPE	STATUS	VALUE	UOM	REFCODE

MERCURY								
7439-97-6	FLORIDA ST.	DW	MCL	H	S	.002	MG/L	2
	M&W	DW	MAC	H	S	.001	MG/L	5
	MOE	DW	MAC	H	S	.001	MG/L	1
	NEW YORK	AMBIENT	AWQS	H	S	2.000	UG/L	16
		DW	MCL	H	S	.002	MG/L	25
		GW	GWQS	H	S	.002	MG/L	16
	USSR	DW	MPC	H	S	.005	MG/L	12
	WHO	DW	GV	H	S	.001	MG/L	4

MERCURY AND COMPOUNDS								
9439-97-6+	NEW JERSEY	GW	GW1	A	S	.002	MG/L	21
			GW2	A	S	.002	MG/L	21
			GW3	A	S	.002	MG/L	21

META-ACRYLAMIDE								
	USSR	DW	MPC	H	S	.100	MG/L	12

METALAXYL								
	NACA	GW	HGL	H	P	.250	MG/L	22

METHACRYLIC ACID								
79-41-4	EPA	DW	SNAEL	H	S	35.000	UG/L	10

METHANE								
74-82-8	MOE	DW	MDC	A	S	3.000	L/M3	1

METHOMYL								
16752-77-5	EPA	DW	HA LIFE	H	S	.875	MG/L	27
			HA LIFE A	H	S	.175	MG/L	27
			HA1 C	H	S	.250	MG/L	27
			HA10 C	H	S	.250	MG/L	27
			HA1 C	H	S	.250	MG/L	27
	NACA	GW	HGL	H	P	.250	MG/L	22

METHOXYCHLOR								
72-43-5	AMMA	DW	ELLTC	H	P	.035	MG/L	23
			ELSTC	H	P	2.800	MG/L	23
	EPA	AMBIENT	AWQC	H	S	100.000	UG/L	9
		DW	HA LIFE	H	S	1,700.000	UG/L	7
			HA LIFE A	H	S	340.000	UG/L	7
			HA1 C	H	S	6,400.000	UG/L	7

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CHEMICAL								
CAS#	AGENCY	CATEGORY	LIMIT	LTYPE	STATUS	VALUE	UOM	REFCODE
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METHOXYCHLOR								
72-43-5	EPA	DW	HA10 C	H	S	2,000.000	UG/L	7
			HALT C	H	S	.500	MG/L	7
			MCL	H	S	.100	MG/L	28
			MCLG	H	P	.340	MG/L	8
			SNAEL	H	S	35.000	UG/L	10
	FLORIDA ST.	DW	MCL	H	S	.100	MG/L	2
	H&W	DW	MAC	H	S	.900	MG/L	5
	MOE	DW	MAC	H	S	.100	MG/L	1
	NEW YORK	AMBIENT	AWQS	H	S	35.000	UG/L	16
		DW	MCL	H	S	.100	MG/L	25
		GW	GWQS	H	S	35.000	UG/L	16
	WHO	DW	GV	H	S	30.000	UG/L	4
METHYL ACETATE								
79-20-9	USSR	DW	MPC	H	S	.100	MG/L	12
METHYL ACRYLATE								
96-33-3	USSR	DW	MPC	A	S	.020	MG/L	12
METHYL DEMETON								
8022-00-2	USSR	DW	MPC	A	S	.010	MG/L	12
METHYL DITHIOCARBAMATE								
	USSR	DW	MPC	A	S	.020	MG/L	12
METHYL ETHYL KETONE								
78-93-3	EPA	DW	HA LIFE	H	S	.860	MG/L	7
			HA LIFE A	H	S	170.000	UG/L	7
			HA1 C	H	S	75.000	MG/L	7
			HA10 C	H	S	7.500	MG/L	7
			HALT A	H	S	8.600	MG/L	7
			HALT C	H	S	2.500	MG/L	7
	USSR	DW	MPC	A	S	1.000	MG/L	12
METHYL METHACRYLATE								
80-62-6	NEW YORK	GW	GWQS	H	S	.700	MG/L	16
METHYL PARATHION								
298-00-0	CALIFORNIA ST. DHS	DW	AL	H	S	.030	MG/L	3
	EPA	DW	HA LIFE	H	S	9.000	UG/L	27
			HA LIFE A	H	S	2.000	UG/L	27

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CHEMICAL								
CAS#	AGENCY	CATEGORY	LIMIT	LTYPE	STATUS	VALUE	UCM	REFCODE
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METHYL PARATHION								
298-00-0	EPA	DW	HA1 C	H	S	.310	MG/L	27
			HA10 C	H	S	.310	MG/L	27
			HALT A	H	S	.100	UG/L	27
			HALT C	H	S	30.000	UG/L	27
	H&W	DW	MAC	H	S	.007	MG/L	5
	MOE	DW	MAC	H	S	.007	MG/L	1
	USSR	DW	MPC	A	S	.020	MG/L	12
METHYLAMINE								
74-89-5	USSR	DW	MPC	H	S	1.000	MG/L	12
METHYLENE CHLORIDE								
75-09-2	CALIFORNIA ST. DHS	DW	AL	H	S	40.000	UG/L	3
	EPA	DW	HA LIFE	H	S	1,750.000	UG/L	7
			HA1 C	H	S	13,300.000	UG/L	7
			HA10 C	H	S	1,500.000	UG/L	7
	H&W	DW	MAC	H	S	.050	MG/L	5
	MOE	DW	MAC	H	S	.050	MG/L	1
	NAS	DW	SNARL 7	H	S	5,000.000	UG/L	11
	USSR	DW	MPC	A	S	7.500	UG/L	12
METHYLNITROPHOS								
	USSR	DW	MPC	A	S	.250	MG/L	12
METHYLOL META-ACRYLAMIDE								
	USSR	DW	MPC	H	S	.100	MG/L	12
METHYLSTYRENE(ALPHA)								
	USSR	DW	MPC	A	S	.100	MG/L	12
METOLACHLOR								
51218-45-2	EPA	DW	HA LIFE	H	S	.525	MG/L	27
			HA LIFE A	H	S	.010	MG/L	27
			HA1 C	H	S	1.400	MG/L	27
			HA10 C	H	S	1.400	MG/L	27
			HALT A	H	S	1.050	MG/L	27
			HALT C	H	S	.300	MG/L	27
	H&W	DW	IMAC	H	S	.050	MG/L	5
	MOE	DW	IMAC	H	S	.050	MG/L	1
METRIBUZIN								
21087-64-9	EPA	DW	HA LIFE	H	S	.875	MG/L	27

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CHEMICAL								
CAS#	AGENCY	CATEGORY	LIMIT	LTYPE	STATUS	VALUE	UOM	REFCODE
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METRIBUZIN								
21087-64-9	EPA	DW	HA LIFE A	H	S	.175	MG/L	27
			HA1 C	H	S	4.500	MG/L	27
			HA10 C	H	S	4.500	MG/L	27
			HALT A	H	S	.875	MG/L	27
			HALT C	H	S	.250	MG/L	27
	H&W	DW	MAC	H	S	.080	MG/L	5
	MOE	DW	MAC	H	S	.080	MG/L	1
	NACA	GW	HGL	H	P	.250	MG/L	22
MINERAL OIL								
	USSR	DW	MPC	A	S	.100	MG/L	12
MINERAL OILS								
	EEC	DW	MADC	A	S	10.000	UG/L	6
MOLYBDENUM								
7439-98-7	USSR	DW	MPC	H	S	.500	MG/L	12
MONOCHLOROBENZENE								
108-90-7	EPA	DW	MCL	H	P	.100	MG/L	34
			MCLG	H	P	.060	MG/L	8
			SNCL	A	P	.100	MG/L	34
	H&W	DW	AO	A	P	.030	MG/L	5
			MAC	H	P	.080	MG/L	5
	MOE	DW	AO	A	P	.030	MG/L	1
			MAC	H	P	.080	MG/L	1
MONOPROPYLAMINE								
	USSR	DW	MPC	A	S	.500	MG/L	12
MONOSODIUMCYANURATE								
	USSR	DW	MPC	A	S	25.000	MG/L	12
MONURON								
150-68-5	USSR	DW	MPC	A	S	5.000	MG/L	12
N,N-DIMETHYL-PIPERIDINUM CL.								
	NACA	GW	HGL	H	P	5.000	MG/L	22
N-BUTYL ALCOHOL								
71-36-3	USSR	DW	MPC	A	S	1.000	MG/L	12

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CHEMICAL									
CAS#	AGENCY	CATEGORY	LIMIT	LTYPE	STATUS	VALUE	UOM	REFCODE	

N-BUTYL PHTHALATE									
	EPA	DW	SNAEL	H	S	38.500	UG/L	10	

N-NITROSO-DIPHENYLAMIDE									
86-30-6	NEW YORK	AMBIENT	AWQS	H	P	14.000	UG/L	16	

NAPHTHALENE									
91-20-3	NEW YORK	AMBIENT	AWQS	A	S	10.000	UG/L	16	

NAPHTHOL (1)									
90-15-3	USSR	DW	MPC	A	S	.100	MG/L	12	

NAPHTHOL (2)									
135-19-3	USSR	DW	MPC	H	S	.400	MG/L	12	

NAPHTHOL (ALPHA)									
	USSR	DW	MPC	A	S	.100	MG/L	12	

NAPROAMIDE									
	NACA	GW	HGL	H	P	3.000	MG/L	22	

NIACINAMIDE									
98-92-0	NEW YORK	AMBIENT	AWQS	H	S	500.000	UG/L	16	

NICKEL									
7440-02-0	EEC	DW	MADC	H	S	50.000	UG/L	6	
	EPA	AMBIENT	AWQC	H	S	13.400	UG/L	9	
		DW	HA LIFE	H	S	350.000	UG/L	7	
			HA LIFE A	H	S	150.000	UG/L	7	
			HA1 C	H	S	1.000	MG/L	7	
			HA10 C	H	S	1,000.000	UG/L	7	
			HA1T A	H	S	.350	MG/L	7	
			HA1T C	H	S	.100	MG/L	7	

NITRALIN									
	EPA	DW	SNAEL	H	S	35.000	UG/L	10	
	NEW YORK	GW	GWQS	H	S	35.000	UG/L	16	

NITRAPYRIN									
	NACA	GW	HGL	H	P	.015	MG/L	22	

NITRATE									
	EPA	DW	HA10 C	H	S	10.000	MG/L	##	7

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CHEMICAL								
CAS#	AGENCY	CATEGORY	LIMIT	LTYPE	STATUS	VALUE	UOM	REFCODE
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NITROBENZENE								
98-95-3	NEW YORK	AMBIENT	AWQS	A	S	30.000	UG/L	16
	NIOSH	DW	SNARL 1	H	S	.035	MG/L	24
			SNARL 7	H	S	.005	MG/L	24
NITROCHLOROBENZENE								
	USSR	DW	MPC	H	S	.050	MG/L	12
NITROCYCLOHEXANE								
	USSR	DW	MPC	H	S	.100	MG/L	12
NITROPHENOL (ORTHO)								
88-75-5	USSR	DW	MPC	H	S	.060	MG/L	12
NITROPHENOL (PARA)								
100-02-7	USSR	DW	MPC	H	S	.020	MG/L	12
NITROPHENYLACETYLAMINOETHANOL (P)								
	USSR	DW	MPC	A	S	1.000	MG/L	12
NITROPHENYLAMINOETHANOXYAM (P)								
	USSR	DW	MPC	A	S	.500	MG/L	12
NITROPHENYLCHLOROMETHYLCARBIN (P)								
	USSR	DW	MPC	A	S	.200	MG/L	12
NITROSAMINES								
	EPA	AMBIENT	AWQC	H	S	.800	NG/L **	9
NITROSODIBUTYLAMINE N								
	EPA	AMBIENT	AWQC	H	S	6.400	NG/L **	9
NITROSODIETHYLAMINE N								
55-18-5	EPA	AMBIENT	AWQC	H	S	.800	NG/L **	9
NITROSODIMETHYLAMINE N								
62-75-9	EPA	AMBIENT	AWQC	H	S	1.400	NG/L **	9
NITROSODIPHENYLAMINE N								
	EPA	AMBIENT	AWQC	H	S	4,900.000	NG/L **	9
NITROSOPYRROLIDINE N								
	EPA	AMBIENT	AWQC	H	S	16.000	NG/L **	9

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CHEMICAL								
CAS#	AGENCY	CATEGORY	LIMIT	LTYPE	STATUS	VALUE	UOM	REFCODE

NITRATE								
	EPA	DW	MCLG	H	P	10.000	MG/L	8
	NEW YORK	AMBIENT	AWQS	H	S	10,000.000	UG/L	16
		DW	MCL	H	S	10.000	MG/L	25
		GW	GWQS	H	S	10.000	MG/L	16

NITRATE AS N								
	EPA	DW	MCL	H	P	10.000	MG/L	13
	FLORIDA ST.	DW	MCL	H	S	10.000	MG/L	2
	H&W	DW	MAC	H	S	10.000	MG/L	5
	MOE	DW	MAC	H	S	10.000	MG/L	1
	USSR	DW	MPC	H	S	10.000	MG/L	12
	WHO	DW	GV	H	S	10.000	MG/L	4

NITRATE-NITROGEN								
	NEW JERSEY	GW	GW1	A	S	2.000	MG/L	21
			GW2	A	S	10.000	MG/L	21
			GW3	A	S	10.000	MG/L	21

NITRATES								
	EEC	DW	GL	A	S	25.000	MG/L	6
			MADC	A	S	50.000	MG/L	6
	EPA	AMBIENT	AWQC	H	S	10.000	MG/L	9

NITRILOTRIACETIC ACID(NTA)								
139-13-9	H&W	DW	MAC	H	S	.050	MG/L	5
	MOE	DW	MAC	H	S	.050	MG/L	1

NITRITE								
	EPA	DW	MA10 C	H	S	1.000	MG/L ##	7
			MCL	H	P	1.000	MG/L	34
			MCLG	H	P	1.000	MG/L	8

NITRITE AS N								
	H&W	DW	MAC	H	S	1.000	MG/L	5
	MOE	DW	MAC	H	S	1.000	MG/L	1

NITRITES								
	EEC	DW	MADC	A	S	.100	MG/L	6

NITROBENZENE								
98-95-3	EPA	AMBIENT	AWQC	H	S	19.800	MG/L	9

***** PALIS SYSTEM PARAMETER REPORT---10/16/90 *****

CHEMICAL								
CAS#	AGENCY	CATEGORY	LIMIT	LTYPE	STATUS	VALUE	UOM	REFCODE

NONYL ALCOHOL								
143-08-8	USSR	DW	MPC	H	S	.010	MG/L	12

ODOUR								
	EEC	DW	GL	A	S	.000	D#	6
			MADC	A	S	3.000	D#	6
	EPA	DW	SMCL	A	S	3.000	D#	28

ORGANIC NITROGEN								
	MOE	DW	MDC	A	S	.150	MG/L ***	1

ORGANOPHOSPHORUS&CARBAMATE PESTI								
	AWWA	DW	ELLTC	H	P	.100	MG/L	23
			ELSTC	H	P	2.000	MG/L	23

ORYZALIN								
	NACA	GW	HGL	H	P	.090	MG/L	22

OXAMYL								
	EPA	DW	HA LIFE	H	S	.875	MG/L	7
			HA LIFE A	H	S	175.000	UG/L	7
			HA1 C	H	S	.175	MG/L	7
			HA10 C	H	S	.175	MG/L	7
			HALT A	H	S	.175	MG/L	7
	NACA	GW	HGL	H	P	.250	MG/L	22

OXYDEMETON-METHYL								
301-12-2	NACA	GW	HGL	H	P	.050	MG/L	22

PARAQUAT								
1910-42-5	EPA	DW	HA LIFE	H	S	.160	MG/L	27
			HA LIFE A	H	S	.003	MG/L	27
			HA1 C	H	S	.100	MG/L	27
			HA10 C	H	S	.100	MG/L	27
			HALT A	H	S	.160	MG/L	27
			HALT C	H	S	.045	MG/L	27
			SNAEL	H	S	.003	MG/L	10
	H&W	DW	IMAC	H	S	.010	MG/L	5
	MOE	DW	IMAC	H	S	.010	MG/L	1
	NEW YORK	GW	GWQS	H	S	2.980	UG/L	16

PARATHION								
56-38-2	CALIFORNIA ST. DHS	DW	AL	H	S	.030	MG/L	3

PALIS SYSTEM PARAMETER REPORT---10/16/90

CHEMICAL								
CAS#	AGENCY	CATEGORY	LIMIT	LTYPE	STATUS	VALUE	UOM	REFCODE

PARATHION								
56-38-2	N&W	DW	MAC	H	S	.050	MG/L	5
	MOE	DW	MAC	H	S	.035	MG/L	1
	USSR	DW	MPC	A	S	.003	MG/L	12

PARATHION AND METHYL PARATHION								
	EPA	DW	SNAEL	H	S	1.500	UG/L	10
	NEW YORK	GW	GWQS	H	S	1.500	UG/L	16

PCB								
	NEW YORK	AMBIENT	AWQS	H	S	.010	UG/L	16
		DW	ASL1	H	S	1.000	UG/L	26
			ASL2	H	S	.100	UG/L	26
		GW	GWQS	H	S	.100	UG/L	16

PCB'S								
	EPA	AMBIENT	AWQC	H	S	.079	MG/L **	9

PCB'S(POLYCHLORINATED BIPHENYLS)								
	EPA	DW	MCLG	H	P	.000	MG/L	8
	MOE	DW	IMAC	H	S	.003	MG/L	1
	NEW JERSEY	GW	GW1	A	S	.001	UG/L	21
			GW2	A	S	.001	UG/L	21
			GW3	A	S	.001	UG/L	21

PCB(TETRACHLOROBIPHENYLS TOTAL)								
	NAS	DW	SNARL 7	H	S	50.000	UG/L	11

PCB(TRICHLOROBIPHENYLS TOTAL)								
	NAS	DW	SNARL 7	H	S	50.000	UG/L	11

POB								
	EPA	DW	SNAEL	H	S	4.700	UG/L	10
	NEW YORK	GW	GWQS	H	S	4.700	UG/L	16

PENTACHLOROBENZENE								
	EPA	AMBIENT	AWQC	H	S	74.000	UG/L	9

PENTACHLOROBUTANE								
	USSR	DW	MPC	A	S	.020	MG/L	12

PENTACHLORONITROBENZENE								
82-68-8	CALIFORNIA ST. DHS	DW	AL	H	S	.900	UG/L	3

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CHEMICAL								
CAS#	AGENCY	CATEGORY	LIMIT	LTYPE	STATUS	VALUE	UOM	REFCODE

PENTACHLOROPHENOL								
87-86-5	CALIFORNIA ST. DHS	DW	AL	H	S	30.000	UG/L	3
	EPA	AMBIENT	AWQC	H	S	1.010	MG/L	9
		DW	MA LIFE	H	S	1,050.000	UG/L	7
			MA LIFE A	H	S	220.000	UG/L	7
			MA1 C	H	S	1,000.000	UG/L	7
			MA10 C	H	S	300.000	UG/L	7
			MALT A	H	S	1,050.000	UG/L	7
			MALT C	H	S	300.000	UG/L	7
			MCL	H	P	.200	MG/L	34
			MCLG	H	P	.220	MG/L	8
			SMCL	A	P	.030	MG/L	34
			SNAEL	H	S	1.050	UG/L	10
	H&W	DW	AO	A	S	.030	MG/L	5
			MAC	H	S	.060	MG/L	5
	MOE	DW	AO	A	S	.030	MG/L	1
			MAC	H	S	.060	MG/L	1
	NAS	DW	SNARL CHR*	H	S	21.000	UG/L	11
	NEW YORK	GW	GWQS	H	S	21.000	UG/L	16
	USSR	DW	MPC	A	S	.300	MG/L	12
	WHO	DW	GV	H	S	10.000	UG/L	4

PENTANATE								
	USSR	DW	MPC	H	S	2.500	MG/L	12

PESTICIDES								
	EEC	DW	MADC	H	S	.500	UG/L	6
	H&W	DW	MAC	H	S	.100	MG/L	5

PH								
	EEC	DW	MADC	A	S	9.500	STDU	6
	EPA	DW	SMCL	A	S	6.500	STD U+++	28
	H&W	DW	MAC	A	S	6.500	STDU +++	5
	MOE	DW	MAC	A	S	6.500	STDU +++	1
	NEW JERSEY	GW	GW1	A	S	4.200	STDU	21
			GW2	A	S	5.000	STDU	21
			GW3	A	S	5.000	STDU	21
	NEW YORK	GW	GWQS	H	S	6.500	STD U	16
	WHO	DW	GV	A	S	6.800	STDU +++	28

PHENOL								
108-95-2	CALIFORNIA ST. DHS	DW	AL	A	S	1.000	UG/L	3

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CHEMICAL

CAS#	AGENCY	CATEGORY	LIMIT	LTYPE	STATUS	VALUE	UOM	REFCODE
PHENOL								
108-95-2	EPA	AMBIENT	AWQC	H	S	3.500	MG/L	9
	NEW JERSEY	GW	GW1	A	S	.300	MG/L	21
			GW2	A	S	3.500	MG/L	21
			GW3	A	S	3.500	MG/L	21
	USSR	DW	MPC	A	S	.001	MG/L	12
				H	S	.001	MG/L	12
PHENOLIC COMPOUNDS								
	NEW YORK	AMBIENT	AWQS	H	S	1.000	UG/L	16
PHENOLS								
	EEC	DW	MADC	A	S	.500	UG/L	6
	MOE	DW	MDC	A	S	.002	MG/L	1
	NEW YORK	GW	GWQS	H	S	.001	MG/L	16
PHENYL ETHER								
101-84-8	NEW YORK	AMBIENT	AWQS	A	S	10.000	UG/L	16
PHENYLENEDIAMINE(PARA)								
106-50-3	USSR	DW	MPC	H	S	.100	MG/L	12
PHENYLHYDRAZINE								
100-63-0	USSR	DW	MPC	H	S	.010	MG/L	12
PHORATE								
298-02-2	EPA	DW	SNAEL	H	S	.035	UG/L	10
	H&W	DW	IMAC	H	S	.002	MG/L	5
	MOE	DW	IMAC	H	S	.002	MG/L	1
PHOSBUTYL								
	USSR	DW	MPC	A	S	.030	MG/L	12
PHOSMET								
	NACA	GW	HGL	H	P	.200	MG/L	22
PHOSPHAMIDE								
	USSR	DW	MPC	A	S	.030	MG/L	12
PHOSPHATE, TOTAL								
	NEW JERSEY	GW	GW1	A	S	.700	MG/L	21

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CHEMICAL								
CAS#	AGENCY	CATEGORY	LIMIT	LTYPE	STATUS	VALUE	UOM	REFCODE

POLYNUCLEAR AROMATIC HYDROCARBON								
	EPA	AMBIENT	AMOC	H	S	2.800	MG/L **	9

POTASSIUM								
7440-09-7	EEC	DW	GL	A	S	10.000	MG/L	6
			MADC	A	S	12.000	MG/L	6

POTASSIUM DIETHYLPHOSPHORODITHIO								
	USSR	DW	MPC	A	S	.500	MG/L	12

POTASSIUM DIISOPROPYLDITHIOPHOS								
	USSR	DW	MPC	A	S	.020	MG/L	12

POTASSIUM PERMANGANATE								
7722-64-7	EEC	DW	GL	A	S	2.000	MG/L	6
			MADC	A	S	5.000	MG/L	6

PROFENOFOS								
	NACA	GW	HGL	H	P	.005	MG/L	22

PROMETON								
1610-18-0	EPA	DW	HA LIFE	H	S	.525	MG/L	27
			HA LIFE A	H	S	.100	MG/L	27
			HA1 C	H	S	.150	MG/L	27
			HA10 C	H	S	.150	MG/L	27
			HA10 C	H	S	.150	MG/L	27

PROMETRYNE								
7287-19-6	NACA	GW	HGL	H	P	.375	MG/L	22
	USSR	DW	MPC	A	S	3.000	MG/L	12

PRONAMIDE								
23950-58-5	EPA	DW	HA LIFE	H	S	2.600	MG/L	27
			HA LIFE A	H	S	.052	MG/L	27
			HA1 C	H	S	.052	MG/L	27
			HA10 C	H	S	.052	MG/L	27

PROPACHLOR								
1918-16-7	EPA	DW	HA LIFE	H	S	.460	MG/L	27
			HA LIFE A	H	S	.092	MG/L	27
			HA1 C	H	S	.500	MG/L	27
			HA10 C	H	S	.500	MG/L	27

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Keywords: child sexual abuse; disclosure; social support

CAS#	AGENCY	CATEGORY	LIMIT	LTYPE	STATUS	VALUE	UOM	REFCODE
PROPACHLOR								
1918-16-7	EPA	DW	HALT A	H	S	.460	MG/L	27
			HALT C	H	S	.130	MG/L	27
			SNAEL	H	S	.035	MG/L	10
	NEW YORK	GW	GWQS	H	S	35.000	UG/L	16
PROPANIL								
709-98-8	EPA	DW	SNAEL	H	S	7.000	UG/L	10
	NEW YORK	GW	GWQS	H	S	7.000	UG/L	16
PROPAZIN								
	USSR	DW	MPC	A	S	1.000	MG/L	12
PROPAZINE								
139-40-2	EPA	DW	HA LIFE	H	S	.700	MG/L	27
			HA LIFE A	H	S	.014	MG/L	27
			HA1 C	H	S	1.000	MG/L	27
			HA10 C	H	S	1.000	MG/L	27
			HALT A	H	S	1.750	MG/L	27
			HALT C	H	S	.500	MG/L	27
			SNAEL	H	S	16.000	UG/L	10
	NEW YORK	GW	GWQS	H	S	16.000	UG/L	16
PROPHAM								
122-42-9	EPA	DW	HA LIFE	H	S	.595	MG/L	27
			HA LIFE A	H	S	.120	MG/L	27
			HA1 C	H	S	5.000	MG/L	27
			HA10 C	H	S	5.000	MG/L	27
			HALT A	H	S	17.500	MG/L	27
			HALT C	H	S	5.000	MG/L	27
PROPOXUR								
114-26-1	CALIFORNIA ST. DHS	DW	AL	H	S	.090	MG/L	3
	EPA	DW	HA LIFE	H	S	.140	MG/L	27
			HA LIFE A	H	S	3.000	UG/L	27
			HA1 C	H	S	.045	MG/L	27
			HA10 C	H	S	.040	MG/L	27
			HALT A	H	S	100.000	UG/L	27
			HALT C	H	S	40.000	UG/L	27
PROPYLBENZENE								
103-65-1	USSR	DW	MPC	A	S	.200	MG/L	12

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CHEMICAL		CAS#	AGENCY	CATEGORY	LIMIT	LTYPE	STATUS	VALUE	UOM	REFCODE
PROPYLENE		115-07-1	USSR	DW	MPC	A	S	.500	MG/L	12
PYRIDINE		110-86-1	USSR	DW	MPC	H	S	.200	MG/L	12
QUINONE DIOXAME(PARA)			USSR	DW	MPC	H	S	.100	MG/L	12
RADIUM 226 + RADIUM 228			EPA	DW	MCL	H	S	5.000	PCI/L	28
			NEW YORK	AMBIENT	AWQS	H	S	5.000	PCI/L	16
RADIUM-226			H&W	DW	MAC	H	S	1.000	BECQ/L	5
			MOE	DW	MAC	H	S	1.000	BECQ/L	1
			NEW YORK	AMBIENT	AWQS	H	S	3.000	PCI/L	16
SAPONIN			USSR	DW	MPC	A	S	.200	MG/L	12
SELENIUM		7782-49-2	EEC	DW	MADC	H	S	10.000	UG/L	6
			EPA	AMBIENT	AWQC	H	S	10.000	UG/L	9
				DW	MCL	H	P	.010	MG/L	13
					MCLG	H	P	.045	MG/L	8
			FLORIDA ST.	DW	MCL	H	S	.010	MG/L	2
			H&W	DW	MAC	H	S	.010	MG/L	5
			MOE	DW	MAC	H	S	.010	MG/L	1
			NEW YORK	AMBIENT	AWQS	H	S	10.000	UG/L	16
				DW	MCL	H	S	.010	MG/L	25
				GW	GWQS	H	S	.020	MG/L	16
			USSR	DW	MPC	H	S	.001	MG/L	12
			WHO	DW	GV	H	S	.010	MG/L	4
SELENIUM AND COMPOUNDS		7782-49-2+	NEW JERSEY	GW	GW2	A	S	.010	MG/L	21
					GW3	A	S	.010	MG/L	21
SETHOXYDIM			NACA	GW	HGL	H	P	1.800	MG/L	22

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CHEMICAL									
CAS#	AGENCY	CATEGORY	LIMIT	LTYPE	STATUS	VALUE	UOM	REFCODE	

SILVER									
7440-22-4	EEC	DW	MADC	A	S	10.000	UG/L	6	
	EPA	AMBIENT	AWQC	H	S	50.000	UG/L	9	
		DW	MCL	H	P	.050	MG/L	13	
			SMCL	A	P	.090	MG/L	34	
	FLORIDA ST.	DW	MCL	H	S	.050	MG/L	2	
	MOE	DW	MAC	H	S	.050	MG/L	1	
	NEW YORK	AMBIENT	AWQS	H	S	50.000	UG/L	16	
		DW	MCL	H	S	.050	MG/L	25	
		GW	GWQS	H	S	.050	MG/L	16	

SILVER AND COMPOUNDS									
7440-22-4+	NEW JERSEY	GW	GW1	A	S	.050	MG/L	21	
			GW2	A	S	.050	MG/L	21	
			GW3	A	S	.050	MG/L	21	

SIMAZINE									
122-34-9	EPA	DW	HA LIFE	H	S	175.000	UG/L	27	
			HA LIFE A	H	S	35.000	UG/L	27	
			HA1 C	H	S	50.000	UG/L	27	
			HA10 C	H	S	50.000	UG/L	27	
			HALT A	H	S	175.000	UG/L	27	
			HALT C	H	S	50.000	UG/L	27	
			SNAEL	H	S	75.250	UG/L	10	
	H&W	DW	IMAC	H	S	.010	MG/L	5	
	MOE	DW	IMAC	H	S	.010	MG/L	1	
	NACA	GW	HGL	H	P	.500	MG/L	22	
	NAS	DW	SNARL CHR*	H	S	1,505.000	UG/L	11	
	NEW YORK	GW	GWQS	H	S	75.250	UG/L	16	
	USSR	DW	MPC	A	S	.000	MG/L	12	

	SIMAZINE(2-OXYDERIVATIVE)								
	USSR	DW	MPC	A	S	.000	MG/L	12	

SIMAZINE(PLUS D-ETHYL SIMAZINE)									
	H&W	DW	IDWG	H	T	.010	MG/L	17	

SODIUM									
7440-23-5	EEC	DW	GL	A	S	20.000	MG/L	6	
			MADC	A	S	150.000	MG/L	6	
	FLORIDA ST.	DW	MCL	H	S	160.000	MG/L	2	
	H&W	DW	AO	A	P	200.000	MG/L	5	

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CHEMICAL

CAS#	AGENCY	CATEGORY	LIMIT	LTYPE	STATUS	VALUE	UOM	REFCODE
SODIUM								
7440-23-5	MOE	DW	AO	A	P	200.000	MG/L	1
	NEW JERSEY	GW	GW1	A	S	10.000	MG/L	21
			GW2	A	S	50.000	MG/L	21
	WHO	DW	GV	A	S	200.000	MG/L	4
SODIUM ADIPATE								
	USSR	DW	MPC	H	S	1.000	MG/L	12
SODIUM CHLORATE								
7775-09-9	USSR	DW	MPC	A	S	20.000	MG/L	12
SODIUM DICHLOROPHOXYACETATE								
	USSR	DW	MPC	A	S	1.000	MG/L	12
SODIUM ETHYLSILICONATE								
	USSR	DW	MPC	A	S	2.000	MG/L	12
SODIUM METHYLSILICONATE								
	USSR	DW	MPC	A	S	2.000	MG/L	12
SODIUM PENTACHLOROPHENOLATE								
	USSR	DW	MPC	A	S	5.000	MG/L	12
SODIUM VINYLSILICONATE								
	USSR	DW	MPC	A	S	2.000	MG/L	12
SOLIDS DISSOLVED AND SALINITY								
	EPA	AMBIENT	AWQC	H	S	250.000	MG/L	9
SOLIDS TOTAL DISSOLVED								
	WHO	DW	GV	A	S	1,000.000	MG/L	4
STRONTIUM								
7440-24-6	USSR	DW	MPC	H	S	2.000	MG/L	12
STRONTIUM-90								
	FLORIDA ST.	DW	MCL	H	S	8.000	PCI/L	2
	H&W	DW	MAC	H	S	10.000	BECQ/L	5
	MOE	DW	MAC	H	S	10.000	BECQ/L	1
	NEW YORK	AMBIENT	AWQS	H	S	8.000	PCI/L	16

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CHEMICAL

CAS#	AGENCY	CATEGORY	LIMIT	LTYPE	STATUS	VALUE	UOM	REFCODE
TEBUTHIURON								
34014-18-1	EPA	DW	HA LIFE	H	S	1.750	MG/L	27
			HA LIFE A	H	S	.350	MG/L	27
			HA1 C	H	S	2.500	MG/L	27
			HA10 C	H	S	2.500	MG/L	27
			HALT A	H	S	.438	MG/L	27
			HALT C	H	S	.125	MG/L	27
	NACA	GW	HGL	H	P	2.000	MG/L	22
TELLURIUM								
13494-80-9	USSR	DW	MPC	H	S	.010	MG/L	12
TEMEPHOS								
	H&W	DW	IMAC	H	S	.280	MG/L	5
	MOE	DW	IMAC	H	S	.280	MG/L	1
TEMPERATURE								
	EEC	DW	GL	A	S	12.000	DEG C	6
			MADC	A	S	25.000	DEG C	6
	H&W	DW	AO	A	S	15.000	DEG C	5
	MOE	DW	MDC	A	S	15.000	DEG C	1
TERBACIL								
5902-51-2	EPA	DW	HA LIFE	H	S	.440	MG/L	27
			HA LIFE A	H	S	.090	MG/L	27
			HA1 C	H	S	.240	MG/L	27
			HA10 C	H	S	.250	MG/L	27
			HALT A	H	S	.875	MG/L	27
			HALT C	H	S	.250	MG/L	27
	NACA	GW	HGL	H	P	.125	MG/L	22
TERBUFOS								
13071-79-9	EPA	DW	HA LIFE	H	S	.880	UG/L	27
			HA LIFE A	H	S	.180	UG/L	27
			HA1 C	H	S	5.000	UG/L	27
			HA10 C	H	S	5.000	UG/L	27
			HALT A	H	S	.880	UG/L	27
			HALT C	H	S	.250	UG/L	27
	H&W	DW	IMAC	H	S	.001	MG/L	5
	MOE	DW	IMAC	H	S	.001	MG/L	1
TETRACHLOROBENZENE								
	USSR	DW	MPC	H	S	.010	MG/L	12

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***** PALIS SYSTEM PARAMETER REPORT---10/16/90 *****

CHEMICAL								
CAS#	AGENCY	CATEGORY	LIMIT	LTYPE	STATUS	VALUE	UCM	REFCODE
-----	-----	-----	-----	-----	-----	-----	---	-----
TETRACHLORODECANE								
	USSR	DW	MPC	A	S	.007	MG/L	12
TETRAETHYL TIM								
	USSR	DW	MPC	H	S	.200	UG/L	12
TETRAHYDROQUINONE								
	USSR	DW	MPC	A	S	.050	MG/L	12
TETRANITROMETHANE								
509-14-8	USSR	DW	MPC	A	S	.500	MG/L	12
THALLIUM								
7440-28-0	EPA	AMBIENT	AWQC	H	S	13.000	UG/L	9
THEOPHYLLINE								
58-55-9	NEW YORK	AMBIENT	AWQS	H	S	40.000	UG/L	16
THIOCYANATES								
	USSR	DW	MPC	H	S	.100	MG/L	12
THIODICARB								
	NACA	GW	HGL	H	P	.300	MG/L	22
THIOPHENE								
110-02-1	USSR	DW	MPC	A	S	2.000	MG/L	12
THIRAM								
137-26-8	EPA	DW	SMAEL	H	S	1.750	UG/L	10
	NEW YORK	GW	GWQS	H	S	1.750	UG/L	16
TOLUENE								
108-88-3	CALIFORNIA ST. DHS	DW	AL	H	S	100.000	UG/L	3
	EPA	AMBIENT	AWQC	H	S	14.300	MG/L	9
		DW	HA LIFE	H	S	12,100.000	UG/L	7
			HA LIFE A	H	S	2,420.000	UG/L	7
			HA1 C	H	S	21,500.000	UG/L	7
			HA10 C	H	S	3,460.000	UG/L	7
			HA12 C	H	S	3,460.000	UG/L	7
			MCL	H	P	2.000	MG/L	34
			MCLG	H	P	2.000	MG/L	8
			SMCL	A	P	.040	MG/L	34

***** PALIS SYSTEM PARAMETER REPORT---10/16/90 *****

CHEMICAL								
CAS#	AGENCY	CATEGORY	LIMIT	LTYPE	STATUS	VALUE	UOM	REFCODE

TOLUENE								
108-88-3	H&W	DW	AO	A	S	.024	MG/L	5
	MOE	DW	AO	A	S	.024	MG/L	1
	NAS	DW	SNARL 7	H	S	35,000.000	UG/L	11
			SNARL CHR	H	S	340.000	UG/L	11
	USSR	DW	MPC	A	S	.500	MG/L	12

TOTAL COLIFORMS								
	EEC	DW	MADC	H	S	.000	COUNT/ML	6
	NEW JERSEY	GW	GW1	A	S	.040	COUNT/ML	21

TOTAL DISSOLVED SOLIDS								
	EPA	DW	SMCL	A	S	500.000	MG/L	28
	H&W	DW	AO	A	S	500.000	MG/L	5
	MOE	DW	MDC	A	S	500.000	MG/L	1
	NEW JERSEY	GW	GW1	A	S	100.000	MG/L	21
			GW2	A	S	500.000	MG/L	21

TOTAL ORGANIC CARBON								
	MOE	DW	MDC	A	S	5.000	MG/L	1

TOXAPHENE								
8001-35-2	AMMA	DW	ELLTC	H	P	.005	MG/L	23
			ELSTC	H	P	1.400	MG/L	23
	EPA	AMBIENT	AWQC	H	S	.710	MG/L **	9
		DW	DWEL	H	S	112.000	UG/L	7
			HA1 C	H	S	500.000	UG/L	7
			HA10 C	H	S	40.000	UG/L	7
			MCL	H	S	.005	MG/L	13
			MCLG	H	P	.000	MG/L	8
			SNAEL	H	S	.440	UG/L	10
	FLORIDA ST.	DW	MCL	H	S	.005	MG/L	2
	MOE	DW	MAC	H	S	.005	MG/L	1
	NEW JERSEY	GW	GW1	A	S	.005	UG/L	21
			GW2	A	S	.005	UG/L	21
			GW3	A	S	.005	UG/L	21
	NEW YORK	DW	MCL	H	S	5.000	UG/L	25

TRIADIMEFON								
	NACA	GW	HGL	H	P	.250	MG/L	22

TRIALATE								
	H&W	DW	MAC	H	S	.230	MG/L	5

PALIS SYSTEM PARAMETER REPORT---10/16/90

CHEMICAL		CAS#	AGENCY	CATEGORY	LIMIT	LTYPE	STATUS	VALUE	UOM	REFCODE
TRIALLATE										
	MOE		DW	MAC	H	S		.230	MG/L	1
TRIBUTYL PHOSPHATE										
126-73-8	USSR	DW	MPC	A	S			.010	MG/L	12
TRICHLORFON										
52-68-6	NACA	GW	HGL	H	P			1.250	MG/L	22
TRICHLOROBENZENE(1,2,4)										
	NEW YORK	AMBIENT	AWQS	A	S			10.000	UG/L	16
TRICHLOROBENZENES										
	NEW YORK	AMBIENT	AWQS	A	S			10.000	UG/L	16
	USSR	DW	MPC	H	S			30.000	MG/L	12
TRICHLOROETHANE(1,1,1)										
71-55-6	CALIFORNIA ST. DHS	DW	SHAEL	H	S			1,000.000	UG/L	3
	EPA	AMBIENT	AWQC	H	S			18.400	MG/L	9
		DW	HA LIFE	H	S			1,000.000	UG/L	7
			HA LIFE A	H	S			200.000	UG/L	7
			HA1 C	H	S			140,000.000	UG/L	7
			HA10 C	H	S			35,000.000	UG/L	7
			HALT A	H	S			125,000.000	UG/L	7
			HALT C	H	S			35,000.000	UG/L	7
			MCL	H	S			200.000	UG/L	20
			MCLG	H	S			200.000	UG/L	8
	FLORIDA ST.	DW	MCL	H	S			200.000	UG/L	2
TRICHLOROETHANE(1,1,2)										
79-00-5	EPA	AMBIENT	AWQC	H	S			.600	UG/L **	9
	NEW YORK	AMBIENT	AWQS	H	S			.600	UG/L	16
TRICHLOROETHYLENE										
79-01-6	CALIFORNIA ST. DHS	DW	AL	H	S			5.000	UG/L	3
	EPA	AMBIENT	AWQC	H	S			2.700	UG/L **	9
		DW	HA LIFE	H	S			260.000	UG/L	7
			MCL	H	S			5.000	UG/L	20.
			MCLG	H	S			.000	UG/L	8
	FLORIDA ST.	DW	MCL	H	S			3.000	UG/L	2
	H&W	DW	MAC	H	S			50.000	UG/L	5
	MOE	DW	MAC	H	S			50.000	UG/L	1

***** PALIS SYSTEM PARAMETER REPORT---10/16/90 *****

CHEMICAL								
CAS#	AGENCY	CATEGORY	LIMIT	LTYPE	STATUS	VALUE	UOM	REFCODE

TRIFLUOROCHLOROPROPANE								
	USSR	DW	MPC	H	S	.100	MG/L	12

TRIFLURALIN								
1582-09-8	EPA	DW	HA LIFE	H	S	87.000	UG/L	27
			HA LIFE A	H	S	2.000	UG/L	27
			HA1 C	H	S	.025	MG/L	27
			HA10 C	H	S	.025	MG/L	27
			HALT C	H	S	.025	MG/L	27
			SNAEL	H	S	.035	MG/L	10
	H&W	DW	IMAC	H	P	.045	MG/L	5
	MOE	DW	IMAC	H	P	.045	MG/L	1
	NACA	GW	HGL	H	P	1.000	MG/L	22
	NEW YORK	GW	GWQS	H	S	35.000	UG/L	16

TRICHALOMETHANES								
	CALIFORNIA ST. DHS	DW	MCL	H	S	.100	MG/L +	3
	EPA	DW	MCL	H	S	.100	MG/L +	13
	FLORIDA ST.	DW	MCL	H	S	.100	MG/L +	2
	H&W	DW	MAC	H	S	.350	MG/L +	5
	MOE	DW	MAC	H	S	.350	MG/L +	1

TRINITROMETHANE								
517-25-9	USSR	DW	MPC	A	S	.010	MG/L	12

TRINITROPHENOL								
	NIOSH	DW	SNARL 1	H	S	4.900	MG/L	24
			SNARL 7	H	S	.200	MG/L	24

TRINITROTOLUENE								
118-96-7	AWWA	DW	ELLTC	H	P	.005	MG/L	23
			ELSTC	H	P	.750	MG/L	23

TRITIUM								
10028-17-8	FLORIDA ST.	DW	MCL	H	S	20,000.000	PCI/L	2
	H&W	DW	MAC	H	S	40,000.000	BECQ/L	5
	MOE	DW	MAC	H	S	40,000.000	BECQ/L	1
	NEW YORK	AMBIENT	AWQS	H	S	20,000.000	PCI/L	16

TUNGSTEN								
7440-33-7	USSR	DW	MPC	H	S	.100	MG/L	12

***** PALIS SYSTEM PARAMETER REPORT---10/16/90 *****

CHEMICAL								
CAS#	AGENCY	CATEGORY	LIMIT	LTYPE	STATUS	VALUE	UOM	REFCODE
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TURBIDITY								
	EEC	DW	GL	A	S	1.000	MG/L	6
			MADC	A	S	10.000	MG/L	6
	EPA	DW	MCL	H	S	1.500	NTU	28
			MCLG	H	P	.100	NTU	8
	H&W	DW	AO	A	S	5.000	NTU	5
			MAC	H	S	1.000	NTU	5
	MOE	DW	MAC	H	S	1.000	FTU	1
	WHO	DW	GV	A	S	5.000	NTU	4
TURPENTINE								
	USSR	DW	MPC	A	S	.200	MG/L	12
URANIUM								
7440-61-1	H&W	DW	MAC	H	S	.100	MG/L	5
	MOE	DW	MAC	H	S	.100	MG/L	1
UROTOPIN								
	USSR	DW	MPC	H	S	.500	MG/L	12
VANADIUM								
7440-62-2	USSR	DW	MPC	H	S	.100	MG/L	12
VINCLOZOLIN								
	NACA	GW	HGL	H	P	2.430	MG/L	22
VINYL ACETATE								
108-05-4	USSR	DW	MPC	H	S	.200	MG/L	12
VINYL CHLORIDE								
75-01-4	CALIFORNIA ST. DHS	DW	AL	H	S	2.000	UG/L	3
	EPA	AMBIENT	AWQC	H	S	2.000	UG/L **	9
		DW	HA1 C	H	S	2,600.000	UG/L	7
			HA10 C	H	S	2,600.000	UG/L	7
			HALT A	H	S	46.000	UG/L	7
			HALT C	H	S	13.000	UG/L	7
			MCL	H	S	2.000	UG/L	20
			MCLG	H	S	.000	UG/L	8
	FLORIDA ST.	DW	MCL	H	S	1.000	UG/L	2
	NAS	DW	SNARL CHR	H	S	1.960	UG/L **	11
	NEW YORK	DW	ASL1	H	S	5.000	UG/L	26
			ASL2	H	S	1.000	UG/L	26

***** PALIS SYSTEM PARAMETER REPORT---10/16/90 *****

CHEMICAL								
CAS#	AGENCY	CATEGORY	LIMIT	LTYPE	STATUS	VALUE	UOM	REFCODE

VINYL CHLORIDE								
75-01-4	NEW YORK	GW	GWQS	H	S	5.000	UG/L	16

XYLENE								
1330-20-7	EPA	DW	HA LIFE	H	S	2,200.000	UG/L	7
			HA LIFE A	H	S	400.000	UG/L	7
			HA1 C	H	S	12,000.000	UG/L	7
			HA10 C	H	S	7,800.000	UG/L	7
			HA1T A	H	S	27,300.000	UG/L	7
			HA1T C	H	S	7,800.000	UG/L	7
			MCL	H	P	10.000	MG/L	34
			MCLG	H	P	.440	MG/L	8
			SMCL	A	P	.020	MG/L	34
	NEW YORK	DW	ASL1	H	S	50.000	UG/L	26
			ASL2	H	S	10.000	UG/L	26
	USSR	DW	MPC	A	S	.050	MG/L	12

XYLENE(META)								
108-38-3	CALIFORNIA ST. DHS	DW	AL	H	S	.620	MG/L	3

XYLENE(ORTHO)								
95-47-6	CALIFORNIA ST. DHS	DW	AL	H	S	.620	MG/L	3

XYLENE(PARA)								
106-42-3	CALIFORNIA ST. DHS	DW	AL	H	S	.620	MG/L	3

XYLENES								
	H&W	DW	AO	A	S	.300	MG/L	5
	MOE	DW	AO	A	S	.300	MG/L	1

ZINC								
7440-66-6	EEC	DW	GL	A	S	100.000	UG/L	6
	EPA	DW	SMCL	A	S	5.000	MG/L	28
	H&W	DW	AO	A	S	5.000	MG/L	5
	MOE	DW	MDC	A	S	5.000	MG/L	1
	NEW YORK	AMBIENT	AWQS	H	S	300.000	UG/L	16
			MAC	A	S	5.000	MG/L	25
		GW	GWQS	H	S	5.000	MG/L	16
	USSR	DW	MPC	H	S	1.000	MG/L	12
	WHO	DW	GV	A	S	5.000	MG/L	4

ZINC AND COMPOUNDS								
7440-66-6+	NEW JERSEY	GW	GW1	A	S	5.000	MG/L	21

***** PALIS SYSTEM PARAMETER REPORT---10/16/90 *****
-----CHEMICAL

CAS#	AGENCY	CATEGORY	LIMIT	LTYPE	STATUS	VALUE	UOM	REFCODE
----	-----	-----	-----	-----	-----	-----	---	-----
ZINC AND COMPOUNDS								
7440-66-6+	NEW JERSEY	GW	GW2	A	S	5.000	MG/L	21
			GW3	A	S	5.000	MG/L	21

ZINEB								
	NEW YORK	GW	GWQS	H	S	1.750	UG/L	16

ZIRAM								
	NEW YORK	GW	GWQS	H	S	4.180	UG/L	16

ZIRAM(AND FERBAM)								
	EPA	DW	SNAEL	H	S	.004	MG/L	10

***** PALIS SYSTEM ALIAS REPORT---11/05/90 *****

PARM	CAS	FULLNAME	SYN
(4-CHLORO-O-TOLOXY)ACETIC ACID	94-74-6	(4-CHLORO-O-TOLOXY)ACETIC ACID	(4-CHLORO-2-METHYLPHENOXY)ACETIC 2-METHYL-4-CHLOROPHENOXYACETIC AGROXONE MCP MCPA METHOXONE
1,1,2TRICHLOR1,2,2TRIFLUOROETHAN		1,1,2TRICHLOR1,2,2TRIFLUOROETHAN	FREON 113
2,4,5-T	93-76-5	2,4,5-T	(TRICHLOROPHENOXY)ACETIC ACID
2,4,5-TP	93-72-1	2,4,5-TP	(TRICHLOROPHENOXY)PROPIONIC ACID SILVEX
2,4-D	94-75-7	2,4-D	(DICHLOROPHENOXY)ACETIC ACID 2,4-D
2,4-DICHLOROPHENOXYBUTYRIC ACID		2,4-DICHLOROPHENOXYBUTYRIC ACID	2,4-DB
3-CHLORO-1,2-PROPANEDIOL	96-24-2	3-CHLORO-1,2-PROPANEDIOL	MONOCHLOROHYDRIN
AMETRYN	834-12-8	AMETRYN	AMETREX AMETRYNE
BENTAZON	25057-89-0	BENTAZON	BENTAZONE
BHC(ALPHA)	319-84-6	BHC(ALPHA)	ALPHA-BENZENE HEXACHLORIDE HEXACHLOROCYCLOHEXANE(ALPHA)
BHC(BETA)		BHC(BETA)	BETA-BENZENE HEXACHLORIDE HEXACHLOROCYCLOHEXANE(BETA)
BHC(TECHNICAL)		BHC(TECHNICAL)	HEXACHLOROCYCLOHEXANE(TECHNICAL)
CARBARYL	63-25-2	CARBARYL	SEVIN
CARBOPHENOTHION	786-19-6	CARBOPHENOTHION	TRITHION
CHLORAMBEN		CHLORAMBEN	AMBIBEN AMIBEN AMIBIN AMOBEN CHLORAMBED CHLORAMBENE
CHLOROBENZENE	108-90-7	CHLOROBENZENE	MONOCHLOROBENZENE
CHLOROPROPHAM		CHLOROPROPHAM	CIPC ISOPROPYL N(3-CHLOROPHENYL)CARBA
CYANAZINE	21725-46-2	CYANAZINE	BLADEX

***** PALIS SYSTEM ALIAS REPORT---11/05/90 *****

PARM ---	CAS ---	FULLNAME -----	SYN ---
CYCLOHEXYLCHLORIDE	542-18-7	CYCLOHEXYLCHLORIDE	CHLOROCYCLOHEXANE
CYCLONITE	121-82-4	CYCLONITE	HEXOGEN
DACTHAL		DACTHAL	CHLOROTHAL DACTHALOR DCP DCPA
DALAPON	75-99-0	DALAPON	DICHLOROPROPIONIC(2,2) ACID
DBCP	96-12-8	DBCP	1,2-DIBROMO-3-CHLOROPROPANE 3-CHLORO-1,2-DIBROMOPROPANE FUMAZONE NEMAFUME NEMAGON
DEMETON	8065-48-3	DEMETON	MERCAPTOPHOS
DI-ALLATE	2303-16-4	DI-ALLATE	AVADEX
DICHLONE	117-80-6	DICHLONE	2,3-DICHLORO-1,4-NAPHTHO
DICHLOROBENZENE(1,2)	95-50-1	1,2-DICHLOROBENZENE	O-DICHLOROBENZENE ORTHO-DICHLOROBENZENE
DICHLOROBENZENE(1,4)	106-46-7	1,4-DICHLOROBENZENE	PARA-DICHLOROBENZENE
DICHLOROETHANE(1,2)	107-06-2	1,2-DICHLOROETHANE	DICHLOROETHANE-1,2 ETHYLENE DICHLORIDE SYM-DICHLOROETHANE
DICHLOROETHYLENE(1,1)	75-35-4	1,1-DICHLOROETHYLENE	1,1-DICHLOROETHENE
DICHLOROETHYLENE(1,2-CIS)	156-59-2	1,2-DICHLOROETHYLENE CIS	1,2-DICHLOROETHENE CIS-1,2-DICHLOROETHYLENE
DICHLOROETHYLENE(1,2-TRANS)	156-60-5	1,2-DICHLOROETHYLENE TRANS	TRANS-1,2-DICHLOROETHYLENE
DICHLOROPHENOL(2,4)	120-83-2	2,4-DICHLOROPHENOL	DICHLOROPHENOL 2,4
DIOXIN(D2CDD)		D2CDD	DICHLORODIBENZO-P-DIOXIN
DIOXIN(H6CDD)		H6CDD	HEXACHLORODIBENZO-P-DIOXIN

***** PALIS SYSTEM ALIAS REPORT---11/05/90 *****

PARM ---	CAS ---	FULLNAME -----	SYN ---
DIOXIN(M1CDD)		M1CDD	MONOCHLORODIBENZO-P-DIOXIN
DIOXIN(O8CDD)		O8CDD	OCTACHLORODIBENZO-P-DIOXIN
DIOXIN(P5CDD)		P5CDD	PENTACHLORODIBENZO-P-DIOXIN
DIOXIN(T3CDD)		T3CDD	TRICHLORODIBENZO-P-DIOXIN
DIOXIN(T4CDD)		T4CDD	TETRACHLORODIBENZO-P-DIOXIN
ETHYLAMINE	75-04-7	ETHYLAMINE	MONOETHYLAMINE
ETHYLENE DIBROMIDE	106-93-4	ETHYLENE DIBROMIDE	1,2-DIBROMOMETHANE EDB
FURAN(D2CDF)		D2CDF	DICHLORODIBENZOFURAN
FURAN(H6CDF)		H6CDF	HEXACHLORODIBENZOFURAN
FURAN(M1CDF)		M1CDF	MONOCHLORODIBENZOFURAN
FURAN(O8CDF)		O8CDF	OCTACHLORODIBENZOFURAN
FURAN(P5CDF)		P5CDF	PENTACHLORODIBENZOFURAN
FURAN(T3CDF)		T3CDF	TRICHLORODIBENZOFURAN
FURAN(T4CDF)		T4CDF	TETRACHLORODIBENZOFURAN
HEPTACHLOR & HEPTACHLOR EPOXIDE	76-44-8+HE	HEPTACHLOR & HEPTACHLOR EPOXIDE	HEPTACHLOR
LINDANE	58-89-9	LINDANE	HEXACHLOROCYCLOHEXANE-GAMMA
METHACRYLIC ACID	79-41-4	METHACRYLIC ACID	METHYL METHACRYLATE
METHYL DEMETON	8022-00-2	METHYL DEMETON	METHYL SYSTOX
METHYL PARATHION	298-00-0	METHYL PARATHION	METAPHOS
METHYLENE CHLORIDE	75-09-2	METHYLENE CHLORIDE	DICHLOROMETHANE

PALIS SYSTEM ALIAS REPORT---11/05/90

PARM ---	CAS ---	FULLNAME ---	SYN ---
NAPHTHOL(2)	135-19-3	2-NAPHTHOL	B-NAPHTHOL
PARATHION	56-38-2	PARATHION	THIOPHOS
PCB		PCB	PCB'S POLYCHLORINATED BIPHENYL
PENTACHLORONITROBENZENE	82-68-8	PENTACHLORONITROBENZENE	TERRACHLOR
PENTACHLOROPHENOL	87-86-5	PENTACHLOROPHENOL	PCP
PROMETRYNE	7287-19-6	PROMETRYNE	PROMETRINE
PROPAZIN		PROPAZIN	PROPazine
PROPOXUR	114-26-1	PROPOXUR	BAYGON
SULFATE		SULFATE	SULPHATE
SULPHATE		SULPHATE	SULFATE
TCP		TCP	1,2,3-TRICHLOROPROPANE
TETRACHLOROETHANE(1,1,2,2)	79-34-5	1,1,2,2-TETRACHLOROETHANE	ACETYLENE TETRACHLORIDE BONOFORM CELLON SYM-TETRACHLOROETHANE TETRACHLOROETHANE
TETRACHLOROETHYLENE	127-18-4	TETRACHLOROETHYLENE	TETRACHLOROETHENE
TRICHLOROETHYLENE	79-01-6	TRICHLOROETHYLENE	TRICHLOROETHENE
TRIFLUOROCHLOROMETHANE	75-69-4	TRIFLUOROCHLOROMETHANE	FREON 11
TRINITROMETHANE	517-25-9	TRINITROMETHANE	NITROFORM

FOOTNOTES

- * limit represents a cancer risk of less than 1×10^{-5} for a lifetime exposure
- ** limit presented as a 1×10^{-6} risk level
- + term "trihalomethanes" comprises chloroform, bromodichloromethane, chlorodibromomethane, and bromoform
- ++ limit based on 5% of the maximum allowable daily intake (10pg/kg/day) for a 60 kg individual consuming 2 L/day
- *** total kjeldahl nitrogen minus ammonia nitrogen
- # limit based on a 1×10^{-6} cancer risk
- ## limit based on a 4 kg infant
- ### as MG/L SiO₂
- +++ pH is quoted as a range from 6.5-8.5

TABLE 1

UNITS OF MEASURE

MG/L	milligrams per litre (parts per million)
UG/L	micrograms per litre (parts per billion)
NG/L	nanograms per litre (parts per trillion)
PG/L	picograms per litre (parts per quadrillion)
NTU	nephelometric turbidity unit
FTU	formazin turbidity unit
BECQ/L	becquerel per litre (1 BECQ/L = 27 PCI/L)
PCI/L	picocurie per litre
D#	dilution number at 25 °C
F/L	fibres per litre
uS/CM	microsiemens per centimetre at 20 °C
TCU	true colour units (platinum cobalt scale)
L/M3	litres per cubic metre
STDU	standard unit of measure

TABLE 2

PALIS SYSTEM REFERENCE FILE REPORT

<u>Refcode</u>	<u>Reference</u>
1	Ontario Drinking Water Objectives, draft revision 1990, Ontario Ministry of the Environment, ISBN 0-7743-8985-0.
2	Public Drinking Water Systems, DER 1984, 17-22.104(1) -- 17-22.104(1)(a)3 (Florida State).
3	California State Department of Health Services, Sanitary Engineering Branch, Revision 110483.
4	Guidelines For Drinking Water Quality Volume1: Recommendations, World Health Organization, 1984 ISBN 92 4 154168 7.
5	Guidelines for Canadian Drinking Water Quality 1978, Ministry of National Health and Welfare ISBN 0-660-10429-6 (updated 1988).
6	EEC Drinking Water Directive, International Environment Reporter, January 14, 1981, 151:0706 -- 151:0712.
7	United States Environmental Protection Agency Health Advisories, Office of Drinking Water, March 31, 1987
8	EPA Moves Toward Final Drinking Water Regs, AWWA Mainstream, December 1985.
9	Ambient Water Quality Criteria, U.S. Environmental Protection Agency, Office of Water Regulations and Standards, Update 1.0 September 2, 1986.
10	Organic Pesticides and Other Organic Contaminants in Drinking Water, Concentration, Toxicity and Suggested No-Adverse-Effect Levels, Drinking Water and Health, National Academy of Science.
11	Limits for Target Organics in Drinking Water, Journal AWWA volume 77#7 pp.88-96, 1985.
12	The Maximum Permissible Concentrations in the USSR for Harmful Substances in Drinking Water, D. Stofen, Toxicology 1, pp. 187-195, 1973.

Refcode

Reference

- 13 Comparison of United States and Canada Drinking Water Regulations, Edward J. Calabrese, Regulatory Toxicology and Pharmacology 3, pp. 417-427, 1983.
- 14 Pesticides Interim Guideline Concentrations, Issue Report - Pesticides In Well Water, January 9, 1986, 86/IR-008 (superseded by update to reference 5).
- 15 Memo Re: Gloucester Waste Disposal Site Clean Up - Water Quality Objectives, Dr. E. McCloskey, Ontario Ministry of Labour, May 1987.
- 16 Water Quality Regulations, Surface Water and Groundwater Classifications and Standards, New York State, Department of Environmental Conservation.
- 17 Interim Drinking Water Guidelines Province of Ontario, Provided by Health and Welfare Canada, August 1986.
- 18 Proposed IMAC for PCDDs and PCDFs in Drinking Water Fact Sheet on Dioxin - Dioxin Background, Ontario Ministry of Environment, 1986.
- 19 Organic Contamination in Groundwater, Journal AWWA Volume 79 pp. 37-42, August 1987.
- 20 Information Alert - Volatile Organic Compounds From US Environmental Protection Agency, R. MacFarlane, Hazardous Contaminants Branch, Ontario Ministry of Environment, July 1987.
- 21 Ground Water Quality Protection, State and Local Strategies, National Academy Press, Washington D.C. 1986.
- 22 Information Alert - Pesticides From National Agricultural Chemicals Association, R. MacFarlane, Hazardous Contaminants Branch, Ontario Ministry of Environment, November 1985.
- 23 Handling the Threat of Contaminated Water Supplies, Opflow Volume 9 number 3 pp.3-4, March 1983.
- 24 Drinking Water and Health, Volume 4 pg.203, National Academy Press, Washington D.C. 1982.
- 25 10 NYCRR Part 5: Drinking Water Regulations, New York State Water Quality Regulations.

Refcode

Reference

- 26 Organic Chemical Action Steps for Drinking
Water, Bureau of Public Water Supply
Protection, New York State Department of
Health - Office of Public Health, December 1985.

- 27 Health Advisories on Pesticides, US Environmental
Protection Agency, PB88-113543/LA, August 1987.

- 28 International Standards for Drinking Water,
I.M. Sayre, Journal AWWA Volume 80 #1 pp.54-60,
1988

- 31 Maximum Contaminant Levels proposed for 12
additional chemicals, 1989. Chemical Regulation
Reporter 13 (9): 644.

- 32 Environmental Protection Agency, 40 CFR parts
141 and 142, Drinking Water Regulations

APPENDIX 1

BACKGROUND INFORMATION ON GUIDELINE-SETTING PROCEDURES

INTRODUCTION

Even when drinking water is obtained from relatively unpolluted sources it can be expected to contain a wide variety of chemicals, both organic and inorganic, at very low concentrations. This knowledge has led to concern about the possibility of long term health effects from consumption of such waters. Drinking Water standards, objectives or guidelines are designed to make sure that any water intended for human consumption contains no disease causing organisms, or hazardous concentrations of toxic chemicals or radioactive substances. Aesthetic parameters such as temperature, taste, odour and colour which determine the pleasantness of water to drink should also be controlled. Consumers may seek other, possibly hazardous sources of drinking water, if the municipal supply is aesthetically unsatisfactory.

Similarly other water quality guidelines may ensure that surface waters used as a source for drinking water and/or from which fish are eaten, and groundwaters contain no chemicals at levels that can be construed as hazardous.

Agencies may monitor for many different substances in drinking and other waters. While many chemicals may be reported as occurring in drinking waters throughout the world not all can be targeted for guidelines. Some are found sporadically, very few occur regularly. Substances for which drinking water guidelines are set generally are selected using certain criteria which may vary from agency to agency.

The selection criteria used by WHO are:

1. documented evidence that the substance can cause acute or chronic illness
2. evidence that the substance is known to occur in significant concentrations in drinking water
3. evidence that the substance has a relatively high frequency of detection in water
4. availability of reliable analytical methods for monitoring and control purposes
5. evidence that the concentration of the substances in water can be controlled.

Prior to establishing any numerical limits, the risk of a substance to the population must be assessed. The potential hazard of a given chemical combined with the level of exposure are the two major components in defining the risk of adverse effects occurring in a given population.

$$\text{HAZARD} + \text{EXPOSURE} = \text{RISK}$$

Because hazard is a property of the chemical itself, if the risk to the population is unacceptable the exposure must change, and specific controls may be imposed in order to eliminate or reduce the risk to an acceptable level. One method of controlling exposure is to set guidelines for the amount of a chemical substance which is allowable in drinking water.

There are two major steps in the guideline-setting procedure - Hazard Assessment and Risk Assessment/Management.

HAZARD ASSESSMENT

The first step in guideline (numerical limit) development is therefore hazard assessment. This involves qualitative and quantitative analysis to determine the potential effect a chemical could have in terms of health, safety or environmental consequences. Data sources might include the results of animal or non-animal tests, results of epidemiological studies, physical and chemical properties and structure. There is considerable uncertainty associated with this process for the following reasons:

- types of health effects may vary with varying exposure and concentration of the same chemical
- different species of animals respond differently to the same concentration of the same chemical
- individuals of the same species may show a wide range in sensitivity to the same chemical
- not all studies reported in the literature are adequately designed or conducted
- chemicals can interact to enhance or diminish a toxic effect.

To determine the amount of a chemical substance that may be ingested without significant risk to the individual, a different approach is used for carcinogens (cancer causing substances) as opposed to non-carcinogens.

a) Acceptable Daily Intake-Safe Factor (ADI-SF) Approach

The Acceptable Daily Intake (ADI) of a chemical is defined as the dose that is anticipated to be without lifetime risk when taken daily. This approach is usually applied to substances which are non-carcinogens. It is based on the determination of the amount of chemical that shows no adverse effect in animal studies, known as the no-observed adverse effect level (NOAEL), divided by a suitable uncertainty (safety) factor. The uncertainty factor chosen can range from 10 to 10,000 or more depending on criteria such as:

- completeness of data
- nature of toxicological data
- severity of lesions
- chemical and kinetic characteristics
- differences in species response

$$\text{ADI} = \text{NOAEL} / \text{safety factor (uncertainty)}$$

Some examples of safety factors which may be applied are:

Differences between species		x10
Differences within species (sensitive members)	(additional)	x10
Sub-chronic to long term extrapolation	(additional)	x10
Non-reversible effects	(additional)	x2-x25

Safety factors, therefore, can be as small as 10 or as large as 25000.

In many instances, a qualitative assessment or professional judgement will be necessary when assigning the safety factors; this may differ from agency to agency, as may the criteria used and the magnitude of the safety factors. Thus, the ADI values developed by different agencies may not be the same.

The ADI-SF approach assumes a threshold in dose response (i.e. there is some dose or exposure where no adverse effect is observed). The safety factor provides the added confidence that no adverse effect will occur at lower levels of exposure even to the most sensitive members of the population.

b) Unit Risk Estimate Approach

In the case of carcinogens, the concept of "threshold" has not found wide acceptance i.e. it is felt that exposure to any level of the substance produces some effect. It is now more common to estimate the level of risk than it is to estimate the ADI for a carcinogen. This yields a 'unit risk estimate' rather than an ADI. Estimation of risk involves development of suitable dose-response data in a lifetime exposure (carcinogenicity) bioassay of animals and extrapolation from the observed dose-response to low-dose exposures in humans. A number of mathematical models may be used to estimate the dose that is expected to be associated with a specific level of risk (probability) of an adverse health outcome (eg. the linear one-hit model, the multi-stage model etc.); each model may provide a widely differing value for the same level of risk. For carcinogens, therefore, agreement between agencies on unit risk estimates will only be good if similar risk estimation models are used. Some agencies will have the risk assessment model which must be used to determine the guideline level specified by their regulations. A risk level of 1 in 100,000 or in 1,000,000 is commonly used in the calculations. The unit risk estimate is thus the amount of a chemical which may be ingested over a lifetime without significant risk.

Because of the number and magnitude of safety factors used in the ADI-SF approach and the nature of the risk assessment models, risks are usually overestimated rather than under estimated i.e. the levels of substances determined by either method to be without significant risk are highly conservative.

2. RISK ASSESSMENT/MANAGEMENT

The second step of the evaluation process leading to a numerical limit (exposure limit) involves risk management. Development of a numerical limit for a substance in drinking water by a jurisdiction takes into account the ADI or unit risk estimates calculated for the substance under review and several other factors such as:

- estimates of intake of the contaminant via all routes of exposure (air, water, food and consumer products) and the percentage of the total daily intake that comes from the exposure route under consideration, in this case drinking water;
- local differences in exposures (variations in consumption patterns, specific sites with high level contamination etc.);
- existence of special populations at risk (pregnant women, infants, fish eaters, native population);

- the level at which analytical methodologies can detect, measure and confirm the presence of the contaminant;
- the costs and benefits of restricting or banning a manufactured chemical;
- available treatment technologies; and
- constraints prescribed or implied in law regarding the intent, development and use of numerical limits.

Since the application of these factors will tend to vary from agency to agency, different numerical limits may well result, even if the same "ADI" or "unit risk estimate" is used initially.

Example:

DRINKING WATER GUIDELINE CALCULATION

Generally, drinking water is not the major source of exposure to chemicals and account must be made for exposure from food, air, occupation and lifestyle. Twenty percent of the ADI is customarily allocated to drinking water. Where most of the intake may be obtained from either air or food, as may be the case with pesticides, one percent is allocated to drinking water. For drinking water, most guidelines are based on the assumption that 2 litres/day will be consumed by a 70 kg person over a period of 70 years. Again these assumptions may vary slightly from jurisdiction to jurisdiction. Drinking water guidelines are determined based on the ADI or unit risk estimate of a chemical, as follows:-

ADI for a certain chemical or unit risk estimate = 10mg/day/kg
(intake associated with a given level of risk)

ADI or unit risk estimate for a 70 kg man = 700 mg/day

20% allocation to drinking water = 140 mg/day

Assuming 2 litres/day consumption = 70 mg/litre

Hence: drinking water guideline for that chemical= 70 mg/litre

This value may be modified upon application of the other factors involved in risk assessment/management such as cost/benefits of restrictions, local conditions, available treatment technologies etc.

Although most agencies have the same general goals of protecting the public's health from pollutants in water, how they go about achieving their goals may vary markedly.

A case in point is provided by drinking water guidelines for trihalomethanes (THM) developed by the USEPA and Canada. At the 100 ug/l MCL, EPA has estimated, using the multi-stage model for cancer risk estimates, that up to four cases of cancer (liver and/or kidney) may occur per 100,000 people who consume 2 litres of water per day over 70 years. The Canadian process used the more conservative linear one-hit model and at the 350 ug/l MAC, estimates predict that one cancer case (kidney) may occur per 2.5 million people per year who consume 2 litres of water per day; this amounts to 3.5 persons per 100,000 over 70 years if put into USEPA terminology. The level of 350 ug/l is considered a maximum level not to be exceeded while the 100 ug/l MCL of the EPA is applied to an average of four quarterly values. The Canadian standard is based on human health considerations, while in the EPA regulation compliance and the premise that control of THM levels during the water treatment process will also control levels of other chlorinated organics were also factors considered in setting the final limit.

It is of great potential benefit to compare and evaluate the guidelines developed by other agencies. It is, however, necessary to carefully examine and recognize the different approaches and assumptions used in establishing them and also to recognise the risk level associated with each guideline.

APPENDIX 2

ONTARIO DRINKING WATER OBJECTIVES @

Ontario Drinking Water Objectives were first approved by the Ontario Water Resources Commission in 1964. The parameters for which given objectives were developed, were principally those contained in the 1962 document "United States Public Health Service Drinking Water Standards". This document has also served as the basis for "Canadian Drinking Water Standards and Objectives" published in 1968. In 1974, a Federal/Provincial Working Group on Drinking Water was formed under the auspices of the Federal/Provincial Advisory Committee on Environmental and Occupational Health. The Working Group was formed to ensure consistency in health parameters on a national scale. The parameters considered were chemical, physical, microbiological, radiological and aesthetic in nature. It was decided, after the latest (1978) Federal Guidelines for Drinking Water Quality were completed, to raise the status of the Working Group to a permanent Sub-Committee on Drinking Water.

The Federal/Provincial Sub-Committee on Drinking Water was established to:

- set priorities for parameters needing limits;
- review recommendations (based on toxicological data) put forward by Health and Welfare Canada; and
- ultimately arrive at a limit based on toxicological data, levels and frequency of occurrence and socio-economic considerations.

As new data becomes available, these guidelines are periodically reviewed.

Ontario usually adopts the Canadian Drinking Water Guidelines as Ontario Drinking Water Objectives, although for certain parameters Ontario's limits may be more stringent; further, Ontario may set its own limits for some substances, should the need arise.

@ extracted in part from a document prepared for the Hazardous Contaminants Coordination Branch by Bev Alder while on developmental assignment.

Criteria for Ontario Drinking Water Objectives (ODWO)

There are three types of criteria set; MACs (Maximum Acceptable Concentrations), IMACs (Interim MACs) and MDCs (Maximum Desirable Concentrations).

MACs are health based numbers that should not cause adverse health effects with exposure to that level for a lifetime. They are frequently based on animal feeding studies because sufficient human toxicological information is rarely available.

IMACs are set for substances with known chronic effects in mammals and for which there are no established maximum acceptable concentrations. Although toxicological, epidemiological and health data are available for such substances the data are subject to public and scientific debate before agreement on a maximum acceptable concentration.

MDCs are set for those parameters that effect the aesthetic quality of the water or may interfere with good water quality control practices.

Generally, municipalities are responsible for plumbing inspection and water distribution for communal water systems covered by the Ontario Water Resources Act (OWRA). Public Utilities Commissions are responsible for the treatment and distribution of water under the auspices of the municipality; hence the municipality has the ultimate responsibility for the quality of water reaching consumers. Private operators of water supply systems governed by the OWRA, are responsible for their water quality and local health agencies are responsible for water supplies not included under the Act (those serving 5 or fewer private residences).

To ensure the provision of water of adequate quality and quantity, a Certificate of Approval is issued to a proponent for the construction of a new waterworks or for alteration to an existing works stating the terms and specific conditions. Factors which influence the authorization to use a certain water source will depend on the following:

- satisfactory quality and adequate quantity of the water source;
- adequate treatment facilities to consistently produce water free from health hazards and to minimize undesirable aspects of finished water quality;
- adequate capacity to meet peak demands without development of low pressures which could result in health hazards;
- enforcement of requirements to prevent development of health hazards; and
- records of laboratory analysis showing consistent compliance with the water quality limits stated.

The Ministry of the Environment provides courses in complete operator education and ensures that proper monitoring programs are maintained. When routine sampling indicates that a guideline has been exceeded, monitoring is intensified (see ODWO*). If necessary, appropriate remedial measures are determined by the Ministry. Occasional short-term values greater than the guideline may be tolerated if medical evaluation indicates that injury to health will not occur.

* Ontario Drinking Water Objectives revised 1983. Ontario Ministry of Environment ISBN 0-7743-8985-0 1984

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